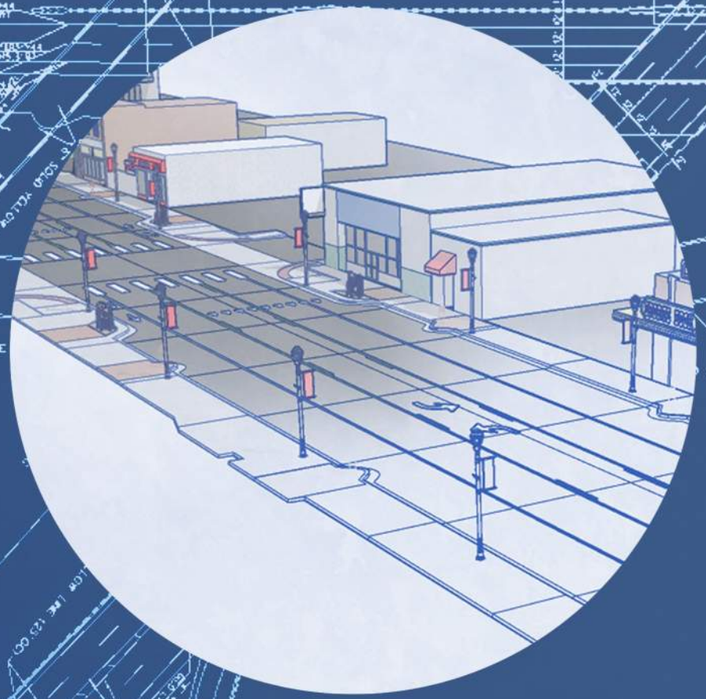
NEVADA DEPARTMENT OF TRANSPORTATION

Plan Preparation Guide

2020



NEVADA DOT
SAFE AND CONNECTED

Table of Contents

1.0 Plan Preparation.

General. This guide is to assist the plan preparer in developing contract plans that are consistent with NDOT standards. It offers solutions to common office questions and is not intended to replace engineering judgment or knowledge. These guidelines are applicable to all projects developed using Bentley V8i software versions. Projects designed using Bentley CONNECT Edition software should be designed to the new guidelines and standards established for that software. A Plan Preparation Guide for the CONNECT Edition will be forthcoming.

1.1 Engineering Document Management.

General. The Department utilizes Bentley ProjectWise to store and organize all project-related engineering documents and design files. Each project will have a designated project folder within ProjectWise named as the five-digit EA number. A standard folder structure has been established with locations for each Division.

1.2 Plan Sheet Orientation and Color.

General. The contract plan sheets shall be produced on 11-inch by 17-inch white paper. The sheets shall be landscape oriented and bound along the left edge. The left margin shall be between ¾" to one inch. The top, bottom, and right margins shall be between ¼" to one-half inch.

Plan thickness. If the thickness of the printed contract plans exceeds three inches, the plan set may need to be separated into volumes to facilitate binding. The break for volumes shall be made at a logical point in the package so that a series of sheets is not separated.

Color. Typically, all proposed plan components shall be displayed in black (Color #0 in NDOT Color Table) and existing components shall be displayed in green (Color #2 in NDOT Color Table). Exceptions are Title Sheet, Location Sketch, Signing, Traffic Control and all sheets containing only text on which all components should be displayed in black. Other colors may be substituted for clarity purposes on a case-by-case basis.

1.3 Plan Submittals and Revisions.

General. A plan submittal occurs when any event in the project development process requires a mass distribution of the associated plans to project contributors and stakeholders such as formal reviews and advertising of the contract. All submittals produced prior to the final advertisement set shall have each sheet clearly marked with the words "Preliminary - Subject to Revision."

During the design process each submittal shall be clearly marked to indicate the event and the production date of the set, or subset of plans (e.g. "Intermediate Design Submittal - January 1, 2099"). This information is generally placed above the preliminary stamp on the title sheet.

Sheet revisions. Revisions made to the advertising set made after the contract has been advertised shall be clearly marked, in red, with a Revision Triangle, cloud bubble surrounding the changes, the word "Revision" , the revision number, and the revision date in the upper-right corner, for example "Revision 1: January 1, 2099." This applies to supplemental notices and contract change orders. See Section 22 Miscellaneous Information for example sheets.

Electronic delivery workflow. Once the plans are ready to be advertised, plan contributors produce their assigned plans in a component PDF in the proper sheet order and in landscape orientation. The plan contributors, such as Bridge, Hydraulics, Traffic, Signals and Lighting, submit a copy of their component PDF to the Designer at the appropriate project schedule. Signatory hardcopies, such as the title sheet or plans by consultant engineers, are scanned into PDF and made part of the single component PDF.

The Designer assembles the various PDF files into a single composite PDF file that will be reproduced by Administrative Services. The composite PDF file contains all sheets that make up the entire contract plans except for the estimate of quantities. The estimate of quantities will be inserted electronically by Administrative Services.

The Designer should add bookmarks to the composite PDF file to make it easier to navigate to various sections of the plan set.

The Designer electronically submits a copy of the composite PDF file to the Specifications Writer. The signed title sheet still needs to be hand delivered to the Specifications Writer for delivery to the Administrative Services Division.

The Specifications Writer electronically submits their Special Provisions, along with the single composite PDF file, to Administrative Services for reproduction, proofing and advertisement.

The electronic delivery server path is \\datsrv1\009specs\009AdminServices\ and the documents are placed in the established contract folder.

The same process, as identified above, occurs for plan revisions when a supplemental notice is issued.

Component naming standards. The following is the naming convention used during the initial submittal event:

Component deliverable	File naming convention
Roadway Design	[EA #] DES.pdf
Drainage	[EA #] HYD.pdf
Right of way	[EA #] ROW.pdf
Signals, Lighting, and ITS	[EA #] SLI.pdf
Permanent Signing	[EA #] SGN.pdf
Bridge	[EA #] STR.pdf

If a supplemental notice occurs after the contract has advertised, the naming convention for the component deliverable is followed by Rev[X]. Example: 75123DESRev1.pdf

Composite naming standards. The following is the naming convention used during the initial submittal event:

Composite deliverable	File naming convention
Full contract set	[Contract #].pdf

If a supplemental notice occurs after the contract has advertised, the naming convention for the composite deliverable is followed by Rev[X]. Example: 75123Rev1.pdf

Resolution and format. PDF Plans should be produced at 600 D.P.I. Setting the default settings in Adobe Distiller or Bluebeam Stapler to "Standard" will meet this requirement.

Compatibility of the PDF file format must adhere to Acrobat 6.x (PDF 1.5) specification.

1.4 Base Plans for other Divisional use.

Roadway Design develops base plans for other Divisions. The Traffic Safety Division, Right of Way, Hydraulics, and Signals and Lighting utilize these plans in order to develop their respective design. Information contained in the base plans includes information such as alignments, edge of pavement, design mapping, and right of way lines. For an example, the base plans provided to the Traffic and Safety Section is for the preparation of Permanent Signs locations. The designer is to coordinate the exchange of this information early in the design with the above-mentioned divisions/sections.

1.5 Consultant Requirements.

Each original contract sheet prepared by a consultant engineer's firm shall be prepared and submitted in accordance with state law. Each sheet shall be stamped and signed by a licensed consultant engineer. The dimensions for the consultant advertisement logo are not to exceed one-half inches high by three inches long. They are to be placed on the location sketch in the lower right corner of the sheet unless the location sketch and title sheet are combined, in which case the advertisement may be placed in the same location on the first typical section sheet. If a consultant firm produces contract sheets only for specific functional areas; such as bridge, hydraulics, and landscape architecture, then the advertisement may only be placed on the first sheet of that section. The consultant shall provide the design files and the files shall be placed in the appropriate folder in ProjectWise.

2.0 Title Sheets.

General. The purpose of the title sheet is to provide a general project location, a description of work to be done, and the route being constructed or improved. Geographical features such as highways, streets, roads, railroads, airports, county lines, detours, lakes, rivers, canals, peaks, mines, springs, wells, passes, and bridges are to be shown.

Title Sheet Guidelines. Electronic versions of the title sheets are retrieved from ProjectWise located at pw:\\pwintsrv1.dot.state.nv.us:NDOTPW\Documents\Divisions\009_Specifications\Title Sheets\

A title sheet is required for all projects. Multiple projects may be combined onto one title sheet if this can be accomplished without clutter or loss of legibility. Multiple projects are those listing two or more projects on the title sheet or having more than one title sheet.

The title sheet may also serve as the location sketch if it adequately fulfills the purpose of both sheets. Combining the title sheet and location sketch is usually done on point projects. Types of point projects include signal modifications, an interchange, cattle guard placement, a pedestrian structure, drainage work, bridge replacement, intersection modification, railroad crossing, or tunnels.

The title sheet must indicate the full route section, or portion of the route section, that is to be constructed or improved. Projects that are not State owned or maintained routes would be designated as “Off System.” Off system projects shall be indicated on the title sheet where the route description would normally be shown.

The CADD Management Section in conjunction with the Planning Division maintains title sheets. The Planning Division reviews the title sheets and location sketch for each project at or approaching intermediate design submittal. Planning’s function is to ensure that route designations and descriptions are current. Title sheet review includes, but is not limited to, alignment bar, milepost tabulation, retraced alignments, route and route section lengths, stationing of routes, route sections, construction and project lengths, and contract history.

All title sheets that are submitted for Planning’s review must include the name and telephone extension of the requestor and the latest date that the title sheet needs to be returned after review. The designer makes the changes as necessary. When the changes have been performed, it is electronically submitted to the CADD Management Section where it is stripped of project related information and stored back on ProjectWise.

Title Sheet Particulars. Specific information for components on the title sheet are as follows:

1) Alignment bar should be placed in the lower half of the title sheet. It depicts key points in the project such as begin/end construction (if applicable), begin/end project, all station equations, alignment designation changes (e.g. “A” to “O” line), structure limits (from abutment to abutment), and project exceptions. Divided roads with dual alignments shall include information for both alignments. The Location Division provides existing alignment information but new alignments (developed by the designers that are to become adopted alignments) need to be coordinated and approved with the Location Division.

Begin/End Construction needs to be identified in the alignment bar with appropriate stationing. These limits are for work that is being performed beyond the project limits, such as additional striping, signing, and pavement transitions beyond the project limits.

2) Approval signature and date is placed in the lower right corner of the Title Sheet. The Director signs the Title Sheet once it has been completed. The approval date and final index of sheets need to be on the title sheet before signature. The project approval date is listed on the processing memo.

3) Begin/End route section is indicated by stationing with a leader/arrow extending to the particular point on the route. Routes may contain more than one route control number. For example, the statewide numbering scheme has 5 route control numbers on I-80 (IR080-1, IR080-2, etc). This information is available in the Milepost Index at http://intra/MPI_Web_Report/. Some routes have multiple designations, so be aware of which designation is the master designation. For additional reference, see Nevada’s State Maintained Highways Descriptions, Index and Maps that is published by Planning (Roadway Systems Division). Show station equations at state lines, county lines, and at begin and end route.

4) Contact information is placed in the lower right-hand corner when the title sheet and location sketch has been combined. Provide the names and phone numbers for the Project Manager, Project Coordinator, and the Designer.

5) Contract number appears in the upper right-hand corner of the title sheet and is provided by Administrative Services. The Specifications Writer usually requests the contract number from Administrative Services after the processing memo is distributed. The contract number is only shown on the first title sheet on any given contract, regardless of the number of title sheets used.

6) Design Criteria is placed near the upper right-hand corner of the title sheet. The design criteria shall provide the current versions that a roadway or bridge is being designed in accordance with.

7) Design designation is placed near the upper right-hand corner of the title sheet. It provides traffic information and is shown on the sheet in tabular form. The information shall contain the average annual daily traffic (AADT) (year advertised) and design year ADT (usually 20 years from the year end of construction), the directional split (D), the design hour volume (DHV), the percentage of trucks T (DHV), and the design velocity (V). This information is requested from the Principal Traffic Operation Engineer and is used for projects such as new construction, capacity projects, and bridge replacements. If the contract is for an interim design, both the interim and final design designation data should be shown. Design designations are not required on preservation projects. However, if engineering was performed under certain design controls, then the controlling data used in the calculations or analysis must be shown such (e.g. traffic volume, velocity, etc.). The posted speed limit must be shown for all railroad safety projects.

8) DOT # and RR Milepost information is placed at railroad crossing(s) on projects that affect railroad structures, or construction that is within railroad right of way. This information is to be shown in a “flag” pointing to the appropriate structure or crossing. DOT# and RR Milepost numbers are provided/updated by the Traffic and Safety Division. RR mileposts are also available in the Milepost Index.

9) History box provides information that includes the project number and station limits, the general description of the work, length of the total route or route section, length of project, length of construction, and length of exceptions within the project limits. The history box is to have leaders that extend to the scaled drawing of the route in a manner that clearly indicates the limits of the project. The project limits are initially established by the program papers but may be changed as deemed necessary. Normally, project limits are tied to county lines, center of intersections, or beginning of a route. “Contract Ahead” and “Contract Back” are to be noted below and above the project station limits respectively, with the most recent original or major construction that was done in the area. Projects such as lighting, fencing, and overlays do not constitute original or major construction. There may be projects where no previous contracts exist; in this case the information would be left off the history.

2.0 Title Sheets (Continued).

10) Index of sheets is placed in the upper left-hand corner of the Title Sheet and provides a listing of the type of sheets within the contract.

The following is an example of the index of sheets with the possible sheets used on a contract:

1 – 1Z	TITLE SHEETS AND LOCATION SKETCHES
2 – 2Z	TYPICAL SECTIONS
3 – 3Z	GENERAL NOTES AND SUMMARIES
4 – 6	ROADWAY PLAN AND PROFILE
7 – 8	GRADING PLAN
9 – 10	GEOMETRICS AND ELEVATION CONTROLS
LC1 – LC9	LOCATION CONTROL
SD1– SD9	SPECIAL DETAILS
SP1 – SP9	SITE PREPARATION (REMOVALS)
L(X)100 – L(X)600	LANDSCAPE DETAILS
D(X)1- D(X)9	DRAINAGE DETAILS
RW1 – RW9	RIGHT-OF-WAY
ST1 – ST9	PERMANENT STRIPING DETAILS
TC1 – TC9	TRAFFIC CONTROL
T1 – T9	SIGNALS AND LIGHTING
ITS1-ITS9	INTELLIGENT TRANSPORTATION SYSTEMS
TS1 – TS9	PERMANENT SIGNING
B1 – B9	BRIDGE SHEETS
BW1 – BW9	RETAINING WALLS AND SOUND WALLS
S1 – S9	STRUCTURE LIST

Note: Structure Lists for each discipline shall be placed at the end of their respective sections. See Section 21 Structure List for additional details.

11) Key map appears in the upper right-hand corner of the title sheet. The purpose of the key map is to show where the project resides within the state.

12) Material site(s) should be indicated on the title sheet to show the general location only. A detailed drawing of the material sites will be included in the Special Provisions.

13) Milepost tabulation information is only necessary on the title sheet when the title sheet and location sketch are combined. See milepost tabulation in Section 2.1 for more details.

14) North arrow is located on the Title Sheet and provides orientation. If township and range lines do not appear on this sheet then this information must be included on the north arrow.

15) Project number and milepost range come from the program papers and are placed along the leader with an arrow pointing to the appropriate location on the key map. There could be multiple project numbers and milepost ranges for one contract. In this case, multiple title sheets may be needed to avoid cluttering.

16) Project number and county is in the upper right corner of the title sheet. List pertinent counties where the project is located.

17) Route section description is shown in the upper middle section of the sheet and describes the extending limits of the route. This information is to also contain the county(s) that the route extends through. Be aware that some routes have multiple route sections (e.g. US 395-1 and US 395-2 or US 50-1 through 6).

18) Scale Bar is in the lower middle section of the sheet and provides a reference to the length in miles or feet. If a different scale is used for the material site subset box, provide the appropriate corresponding scale.

19) Sheet numbering for the title sheet shall begin with number 1. Multiple title sheets shall be numbered 1, 1A, 1B, 1C, etc.

20) Section net includes townships and ranges through which the route section traverses. This information is provided by Location Division and is usually part of the title sheet from the server.

SINGLE PROJECT

CONTRACT 3000

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STP-160-1(20)	CLARK	1
		NYE	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

CLARK AND NYE COUNTIES

FROM SR604 LAS VEGAS BLVD TO WUL OF LAS VEGAS
VIA PAHRUMP VALLEY TO ROUTE US 095

INDEX OF SHEETS
VOLUME I

VOLUME II

DESIGN CRITERIA

XXXX NDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION"
XXXX AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
XXXX FHWA "M.U.T.C.D."
XXXX AASHTO "ROADSIDE DESIGN GUIDE"
XXXX NDOT "ROAD DESIGN MANUAL"

DESIGN DESIGNATION

AADT 1998	6000
AADT 2018	14800
D	57%
DHV	1320
T(DHV)	8%
V	70 MPH

PROJECT STP-160-1(20)

REMOVE 2" PLANTMIX BITUMINOUS SURFACE (COLDMILLING). REPLACE WITH A 2" PLANTMIX BITUMINOUS SURFACE OVERLAY AND OPEN-GRADED WEARING COURSE.

LENGTH OF CONSTRUCTION ON EASTBOUND LANES	14.401	MILES
LENGTH OF CONSTRUCTION ON WESTBOUND LANES	14.396	MILES
LENGTH OF ROUTE SECTION	80.389	MILES

TO BE CONTRACTED

CONTRACT NO. 2785 BACK
BEGIN PROJECT STP-160-1(20) "B" 9+50.000 P.O.T.

"A" 182+25.00 P.O.T.
END PROJECT STP-160-1(20)
CONTRACT NO. 2726 AHEAD

CALIFORNIA
NEVADA

BEGIN SR 160

"A" 693+13.67 P.O.T.=
"B"1097+10.69 P.O.T.

"A" 528+00.00 P.O.T. =
"X" 0+00.00 P.O.T.

END SR 160

ALIGNMENT BAR

BEGIN CONSTRUCTION	
"BE"	15+50.00 P.O.C.
BEGIN PROJECT STP-160-1(20)	
"BE"	10+00.00 P.O.T.
"BE"	0+00.00 P.O.C. =
"AE"	927+85.43 P.O.C.
"AE"	900+10.00 P.O.T. =
STRUCTURE B-9000	
"AE"	900+85.00 P.O.T.
"AE"	183+00.00 P.O.T.
END PROJECT STP-160-1(20)	

BEGIN CONSTRUCTION	
"B"	14+50.00 P.O.C.
BEGIN PROJECT STP-160-1(20)	
"B"	9+50.00 P.O.T.
"B"	0+00.00 P.O.C. =
"A"	927+85.43 P.O.C.
"A"	900+00.00 P.O.T. =
STRUCTURE B-9000	
"A"	900+75.00 P.O.T.
"A"	182+25.00 P.O.T.
END PROJECT STP-160-1(20)	

PROJECT STP-160-1(20)
SR 160-CL 29.09 TO NY 0.20

STATE OF NEVADA
KEY MAP

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.
(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

APPROVED DECEMBER 12, 2012

KRISTINA SWALLOW, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR STEVE SISOLAK
CHAIRMAN, TRANSPORTATION BOARD

MULTIPLE PROJECTS

CONTRACT 3000

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	IM-080-1(128)41	WASHOE / LYON	1A
	STP-080-1(129)67		
	BHO-031(23)		

INDEX OF SHEETS

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS

DESIGN CRITERIA

XXXX NDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION"
XXXX AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
XXXX FHWA "M.U.T.C.D."
XXXX AASHTO "ROADSIDE DESIGN GUIDE"
XXXX NDOT "ROAD DESIGN MANUAL"
XXXX NEVADA SIGN SUPPLEMENT

WASHOE-STOREY-LYON & CHURCHILL COUNTIES

FROM THE CALIFORNIA/ NEVADA STATE LINE SOUTHWEST OF RENO VIA RENO TO THE CHURCHILL/PERSHING COUNTY LINE

PROJECT STP-080-1(129)67
IR80-CH 12.83 to 22.47
PROJECT IM-080-1(128)41
IR80-WA 41.49 to LY 5.84
PROJECT BHO-031(23)
OFF SYSTEM

PROJECT BHO-031(23)

REMOVE AND RECONSTRUCT A PORTION OF CENTER PIER, AND SEISMICALLY UPGRADE 140' GRADE SEPARATION. REMOVE BITUMINOUS SURFACE FROM EXISTING STRUCTURE. SEAL DECK WITH $\frac{3}{4}$" POLYMER CONCRETE. OVERLAY WITH $2\frac{1}{2}$" PLANTMIX BITUMINOUS SURFACE AND OPEN-GRADE FULL WIDTH (28').

LENGTH OF PROJECT 0.027 MILES
LENGTH OF CONSTRUCTION 0.031 MILES
OFF-SYSTEM PROJECT

TO BE CONTRACTED

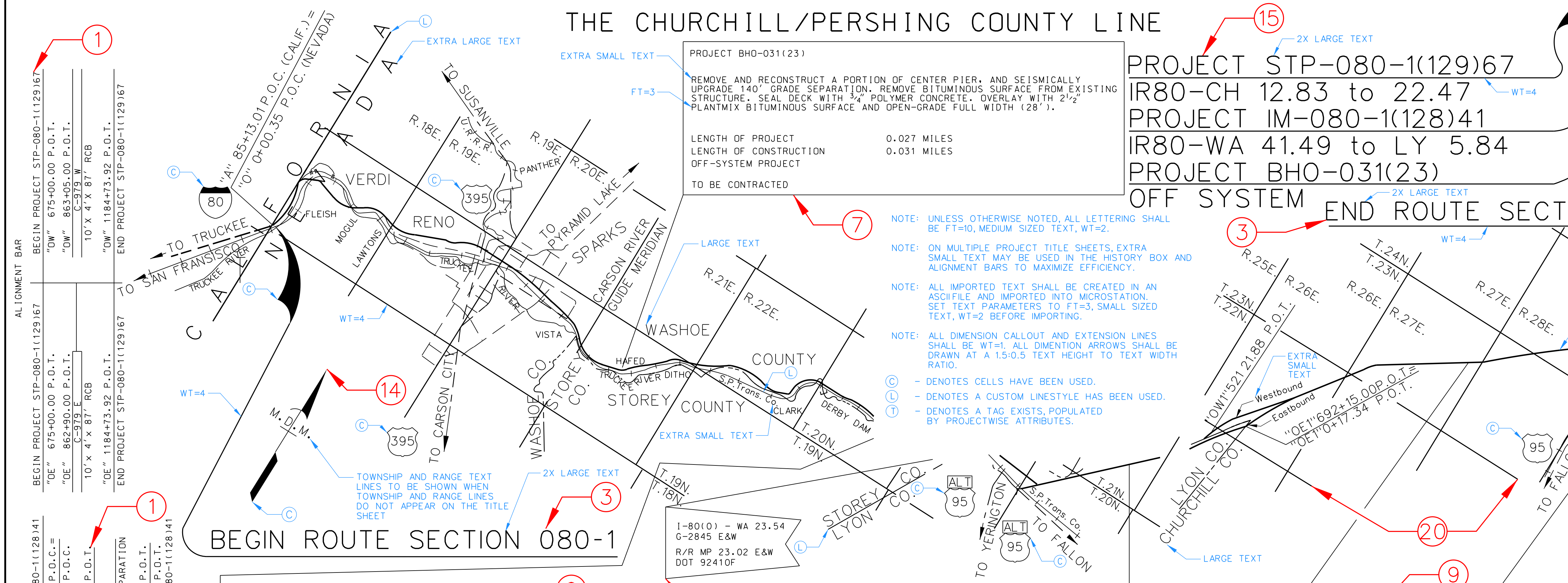
NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

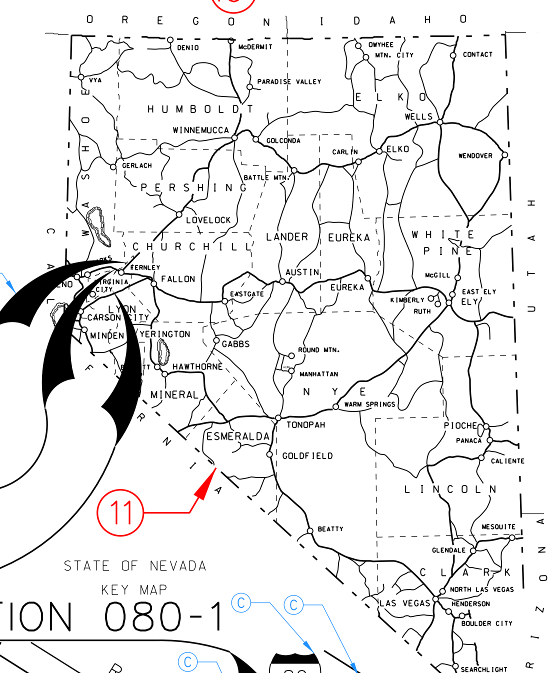
NOTE: ON MULTIPLE PROJECT TITLE SHEETS, EXTRA SMALL TEXT MAY BE USED IN THE HISTORY BOX AND ALIGNMENT BARS TO MAXIMIZE EFFICIENCY.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCIIFILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1, ALL DIMENTION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

Ⓒ - DENOTES CELLS HAVE BEEN USED.
Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.





PROJECT IM-080-1(128)41

REMOVE BITUMINOUS SURFACE FROM EXISTING STRUCTURES. SEAL DECKS WITH $\frac{3}{4}$" POLYMER CONCRETE. REMOVE BITUMINOUS SURFACE (COLDMILLING) 3" DEPTH FROM 76' ROADBED (DUAL 38' : INCLUDES 2-12' TRAVEL LANES, 1-10' AND 1-4' SHOULDER BOTH DIRECTIONS). OVERLAY STRUCTURE AND ROADWAY SURFACES WITH $5\frac{1}{2}$" PLANTMIX BITUMINOUS SURFACE AND OPEN-GRADE FULL WIDTH. REMOVE BITUMINOUS SURFACE (COLDMILLING); OVERLAY WITH PLANTMIX BITUMINOUS SURFACE AND OPEN-GRADE FULL WIDTH ALL RAMPS (DEPTH VARIES).

PROJECT AVERAGE LENGTH	9.426 MILES
LENGTH OF EASTBOUND (WA/ST)	3.590 MILES
LENGTH OF EASTBOUND (LYON)	5.842 MILES
LENGTH OF WESTBOUND (WA/ST)	3.609 MILES
LENGTH OF WESTBOUND (LYON)	5.811 MILES
LENGTH OF ROUTE SECTION	88.672 MILES

TO BE CONTRACTED

PROJECT STP-080-1(129)67

PULVERIZE EXISTING BITUMINOUS SURFACE (8" DEPTH), 8" ROADBED MODIFICATION, CEMENT TREATMENT. REMOVE BITUMINOUS SURFACE FROM ONE STRUCTURE AND SEAL DECK WITH $\frac{3}{4}$" POLYMER CONCRETE. OVERLAY $5\frac{1}{2}$" AND OPEN-GRADE FULL WIDTH (INCLUDES 2-12' TRAVEL LANES, 1-10' AND 1-4' SHOULDER BOTH DIRECTIONS).

PROJECT AVERAGE LENGTH	9.647 MILES
LENGTH OF EASTBOUND	9.642 MILES
LENGTH OF WESTBOUND	9.652 MILES
LENGTH OF ROUTE SECTION	88.672 MILES

TO BE CONTRACTED

APPROVED DECEMBER 12, 2012

KRISTINA SWALLOW, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR STEVE SISOLAK
CHAIRMAN, TRANSPORTATION BOARD

CONTRACT 3000

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	CM-0667(4)	WASHOE	1B

INDEX OF SHEETS ⑩

FT=3

SMALL TEXT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

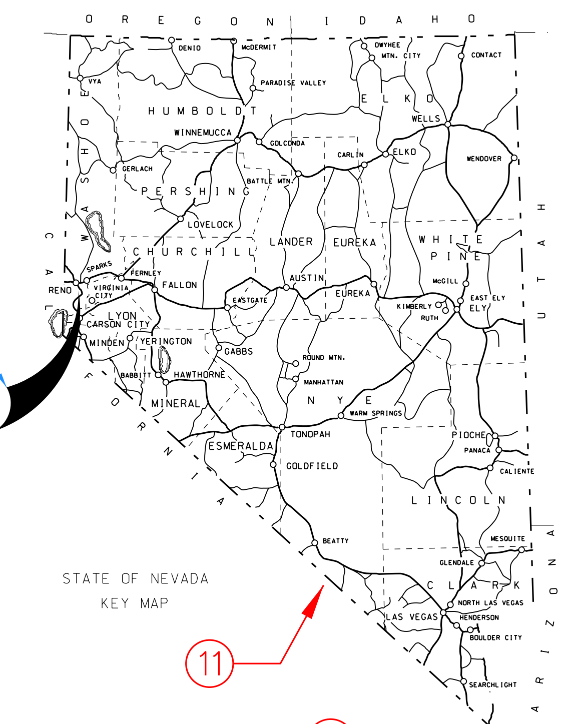
⑰ WASHOE COUNTY

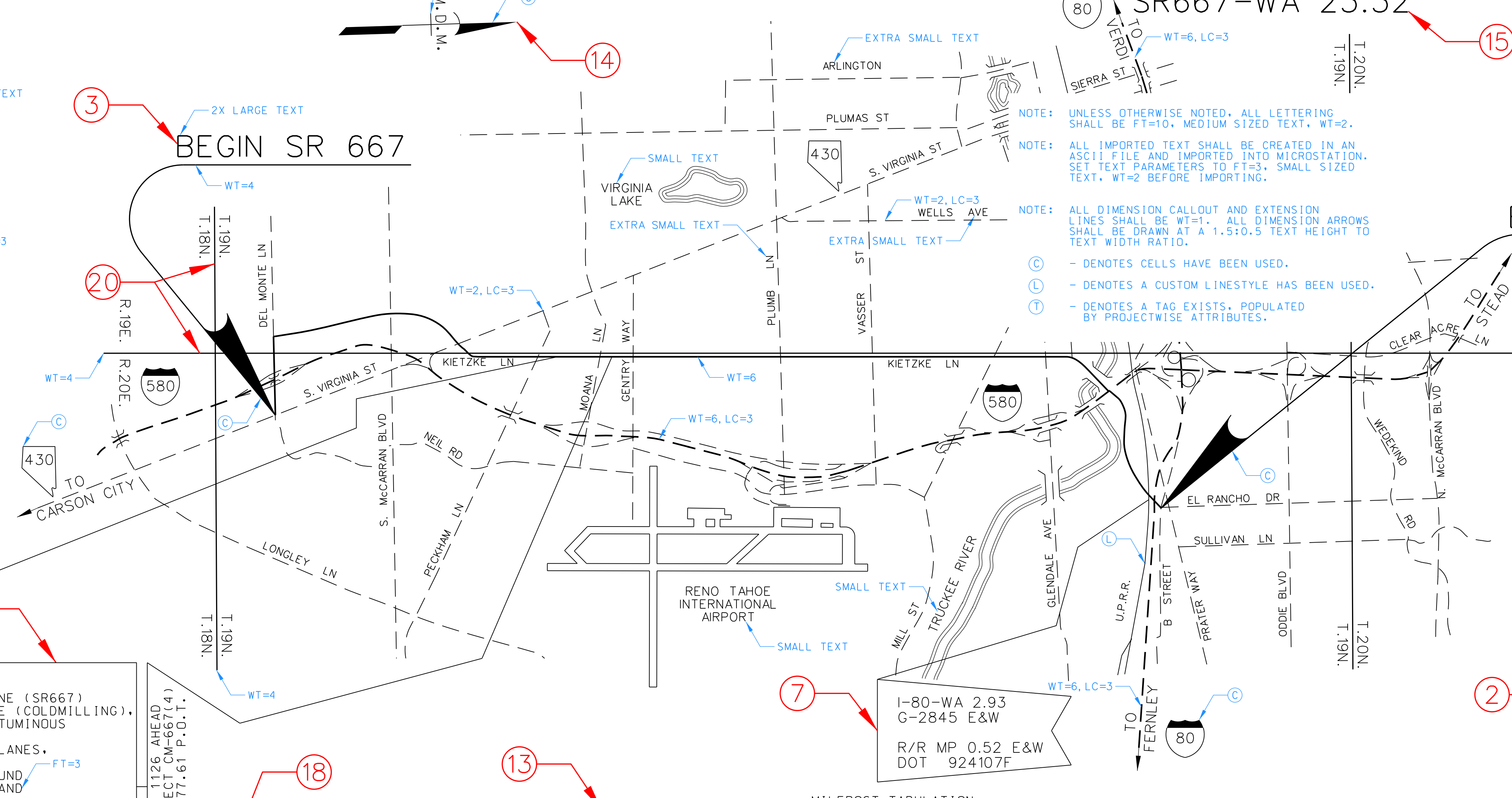
FROM S. VIRGINIA ST. SR430, WEST ON DEL MONTE LN. TO
KIETZKE LN. AND ON KIETZKE LN. FROM DEL MONTE LN. NORTH TO "B" ST.

DESIGN CRITERIA

XXXX NDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION"
XXXX AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
XXXX FHWA "M.U.T.C.D."
XXXX AASHTO "ROADSIDE DESIGN GUIDE"
XXXX NDOT "ROAD DESIGN MANUAL"
XXXX NEVADA SIGN SUPPLEMENT ⑥

⑯ ⑤ ⑲





NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

Ⓒ - DENOTES CELLS HAVE BEEN USED.
Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

⑧

CONTRACT 1126 BACK
BEGIN PROJECT CM-667(4)
"X" 24+57.93 P.O.T.

PROJECT NO. CM-667(4)

MOANA LANE AT KIETZKE LANE (SR667)
REMOVE BITUMINOUS SURFACE (COLDMILLING), OVERLAY WITH PLANTMIX BITUMINOUS SURFACE AND OPEN-GRADE.
CONSRUCT DUAL LEFT TURN LANES, EASTBOUND TO NORTHBOUND AND WESTBOUND TO SOUTHBOUND, EASTBOUND TO NORTHBOUND AND WESTBOUND TO SOUTHBOUND

FT=3

LENGTH OF PROJECT	0.522 MILES
LENGTH OF CONSTRUCTION	0.617 MILES
LENGTH OF ROUTE SECTION	5.895 MILES

TO BE CONTRACTED

SMALL TEXT

CONTRACT 1126 AHEAD
END PROJECT CM-667(4)
"01" 48+77.61 P.O.T.

⑱ 0 ¼ ½ 1
MILES

⑬ MILEPOST TABULATION

STATION	MILEPOST	STATION	COUNTY CUMULATIVE MILES
"X" 24+57.93 P.O.T.	SR667-WA 23.00	BEGIN PROJECT/MILEPOST 23	1.889
"01" 48+77.61 P.O.T.	SR667-WA 23.00	END PROJECT	2.347

APPROVED SEPTEMBER 5, 2012

② KRISTINA SWALLOW, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR STEVE SISOLAK
CHAIRMAN, TRANSPORTATION BOARD

NOTE: CONTACT INFORMATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED.

④ NEVADA DOT

DESIGN DIVISION		
DESIGNER	DESIGNER NAME	PHONE (###) ###-####
SENIOR DESIGNER	SENIOR DESIGNER NAME	PHONE (###) ###-####
PROJECT MANAGER	PROJECT MANAGER NAME	PHONE (###) ###-####

CONTRACT 3000

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	ER-005(11)	DOUGLAS	1C

INDEX OF SHEETS (10)

FT=3

SMALL TEXT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

(17) DOUGLAS COUNTY

FEDERAL-AID FF-SYSTEM ROADWAY PROJECT

RIVERVIEW DRIVE

FT=3

(6) DESIGN CRITERIA

XXXX NDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION"
XXXX AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
XXXX FHWA "M.U.T.C.D."
XXXX AASHTO "ROADSIDE DESIGN GUIDE"
XXXX NDOT "ROAD DESIGN MANUAL"
XXXX NEVADA SIGN SUPPLEMENT

(7) DESIGN DESIGNATION

AADT 1998	3500
AADT 2018	8000
D	42%
DHV	1126
T(DHV)	8%
V	35 MPH

FT=3

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

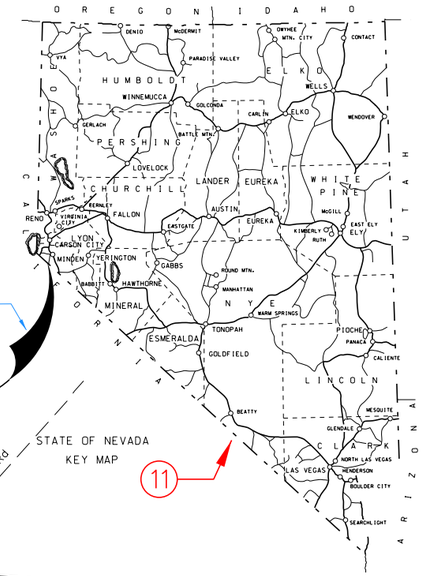
(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

2X LARGE TEXT

(15) PROJECT ER-005(11) OFF SYSTEM

WT=4

2X LARGE TEXT



STATE OF NEVADA KEY MAP

(11)

TOWNSHIP AND RANGE TEXT TO BE SHOWN WHEN TOWNSHIP AND RANGE LINES DO NOT APPEAR ON THE TITLE SHEET

(14)

LARGE TEXT

EXTRA SMALL TEXT

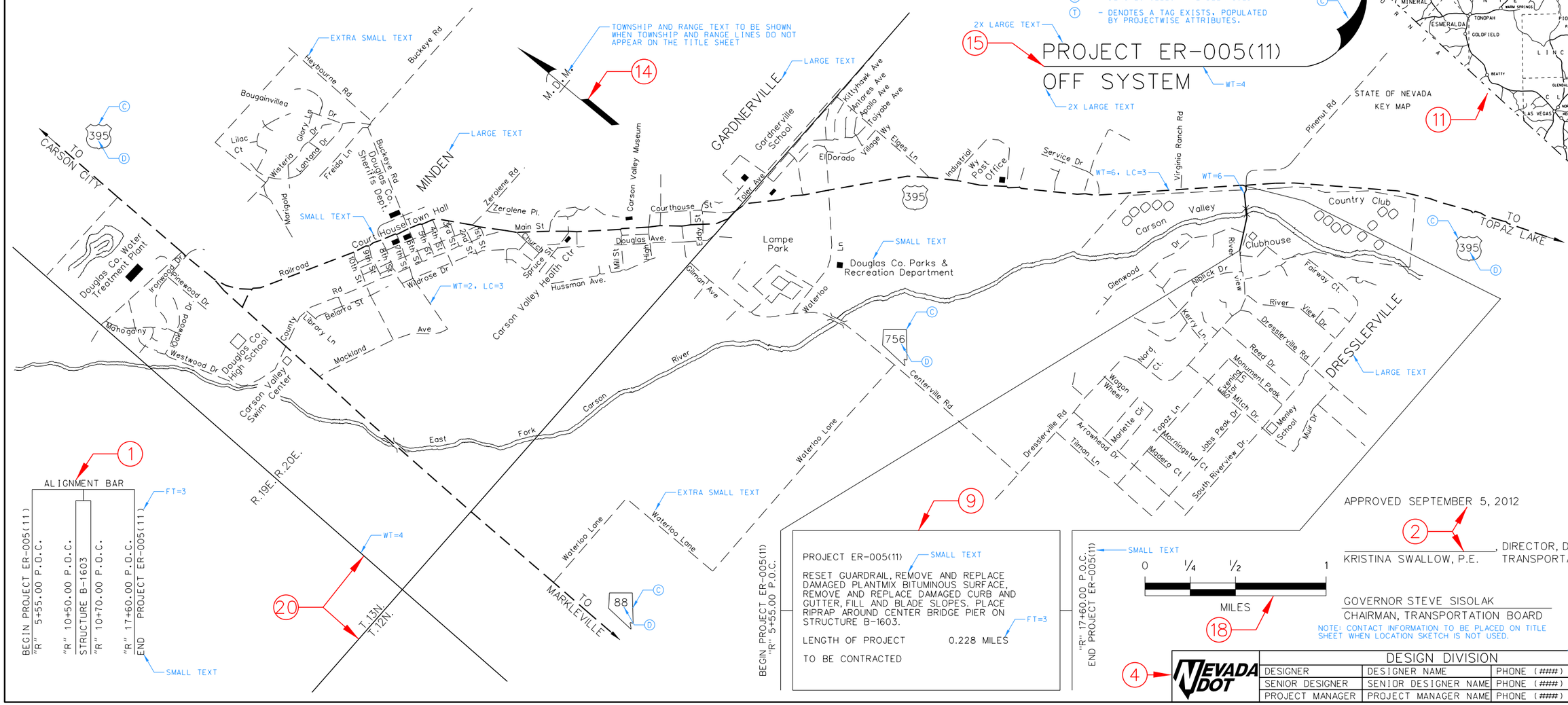
SMALL TEXT

WT=2, LC=3

WT=6, LC=3

WT=6

WT=4



(1) ALIGNMENT BAR

FT=3

BEGIN PROJECT ER-005(11) "R" 5+55.00 P.O.C.
"R" 10+50.00 P.O.C.
STRUCTURE B-1603
"R" 10+70.00 P.O.C.
"R" 17+60.00 P.O.C. END PROJECT ER-005(11)

SMALL TEXT

(20)

(9)

PROJECT ER-005(11) SMALL TEXT

RESET GUARDRAIL, REMOVE AND REPLACE DAMAGED PLANTMIX BITUMINOUS SURFACE, REMOVE AND REPLACE DAMAGED CURB AND GUTTER, FILL AND BLADE SLOPES. PLACE RIPRAP AROUND CENTER BRIDGE PIER ON STRUCTURE B-1603.

LENGTH OF PROJECT 0.228 MILES FT=3

TO BE CONTRACTED

BEGIN PROJECT ER-005(11) "R" 5+55.00 P.O.C.

"R" 17+60.00 P.O.C. END PROJECT ER-005(11)

SMALL TEXT

0 1/4 1/2 1

MILES

(18)

APPROVED SEPTEMBER 5, 2012

(2)

KRISTINA SWALLOW, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR STEVE SISOLAK

CHAIRMAN, TRANSPORTATION BOARD

NOTE: CONTACT INFORMATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED.

(T)

(4) NEVADA DOT

DESIGN DIVISION

DESIGNER	DESIGNER NAME	PHONE (###) ###-#####
SENIOR DESIGNER	SENIOR DESIGNER NAME	PHONE (###) ###-#####
PROJECT MANAGER	PROJECT MANAGER NAME	PHONE (###) ###-#####

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STP-0531(002)	CARSON CITY	1D

INDEX OF SHEETS

FT=3 SMALL TEXT 10

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

CARSON CITY

17

FROM SR 529/NORTH CARSON STREET
EAST TO SR 525/AIRPORT ROAD

DESIGN CRITERIA

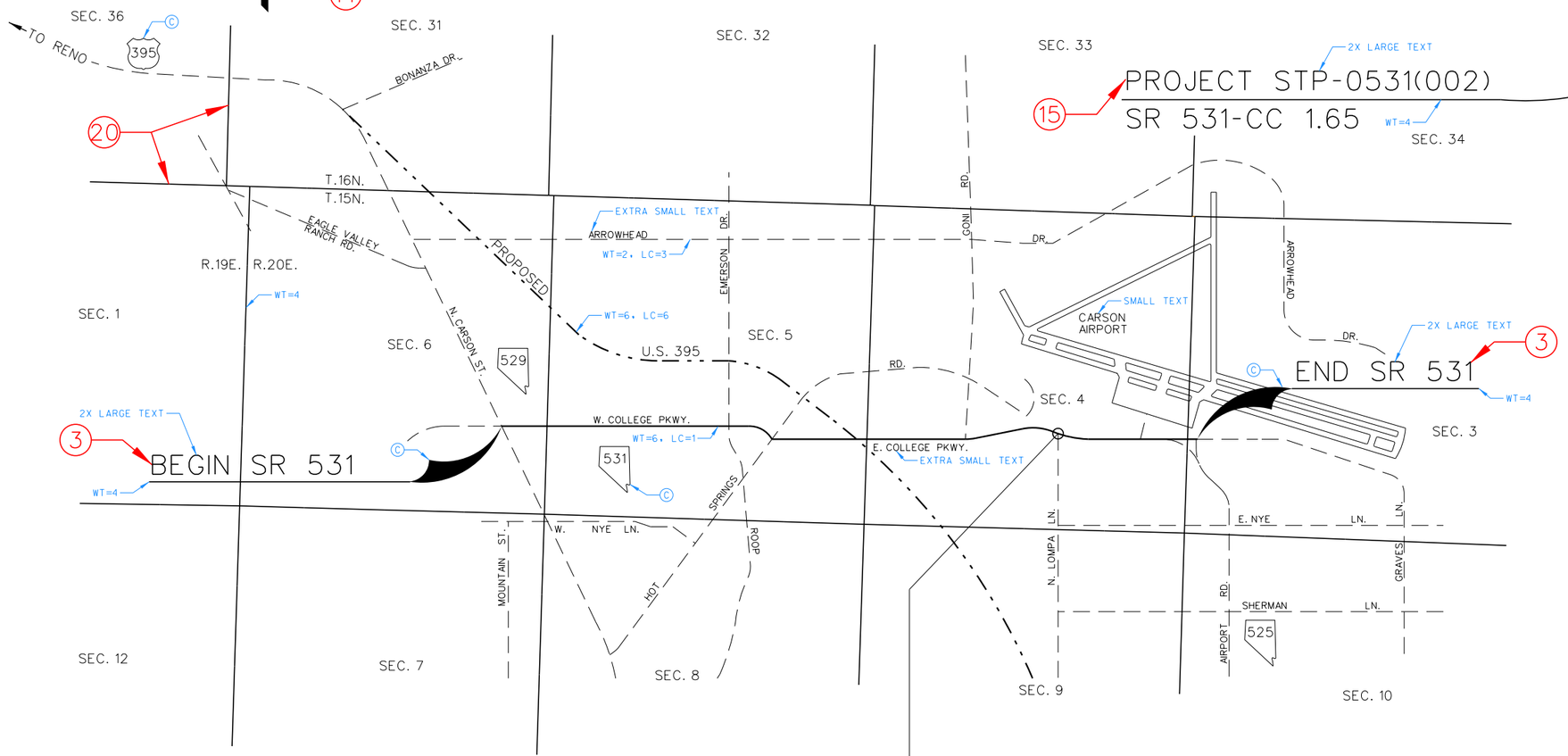
XXXX NDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION"
XXXX AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
XXXX FHWA "M.U.T.C.D."
XXXX AASHTO "ROADSIDE DESIGN GUIDE"
XXXX NDOT "ROAD DESIGN MANUAL"
XXXX NEVADA SIGN SUPPLEMENT

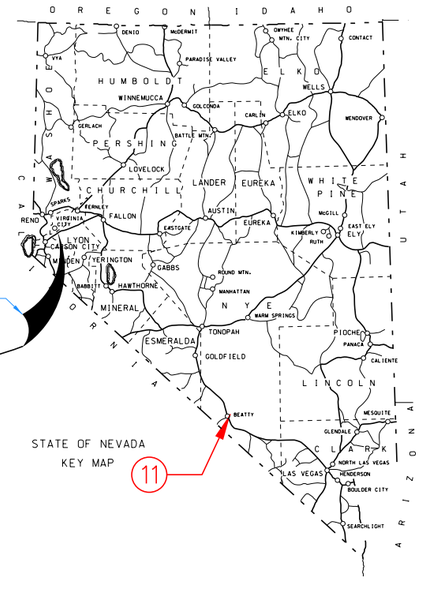
6

5 16 19

TOWNSHIP AND RANGE TEXT TO BE SHOWN WHEN TOWNSHIP AND RANGE LINES DO NOT APPEAR ON THE TITLE SHEET

M.D.M. 14





NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

© - DENOTES CELLS HAVE BEEN USED.

Ⓣ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

APPROVED APRIL XX, 2021

2

KRISTINA SWALLOW, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR STEVE SISOLAK
CHAIRMAN, TRANSPORTATION BOARD

0 1/4 1/2 1 MILES 18

13

MILEPOST TABULATION

STATION	MILEPOST	DESCRIPTION	COUNTY CUMULATIVE MILES
"X" 82+36.80 P.O.T.	SR531-CC 1.56	BEGIN/END PROJECT	1.56

9

PROJECT STP-0531(002) FT=3

COLLEGE PARKWAY (SR531) AT LOMPA LANE
CONSTRUCT NEW SIGNAL SYSTEM

TOTAL LENGTH OF PROJECT 0.000 MILES
TOTAL LENGTH OF ROUTE 2.003 MILES SMALL TEXT

TO BE CONTRACTED

NOTE: CONTACT INFORMATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED. Ⓣ

4

NEVADA DOT	DESIGN DIVISION		
	DESIGNER	DESIGNER NAME	PHONE (###) ###-#####
	SENIOR DESIGNER	SENIOR DESIGNER NAME	PHONE (###) ###-#####
	PROJECT MANAGER	PROJECT MANAGER NAME	PHONE (###) ###-#####

2.1 Location Sketch.

General. The purpose of the location sketch is to provide a more specific project location. This generally relates the project to major survey lines, mileposts, and prominent geographic features (e.g. rivers, city limits, railroads, township and ranges) to facilitate locating and staking plan elements in the field. The location sketch shows designated material sites and where they are in relation to the project.

Location Sketch Guidelines. Electronic versions of location sketches may be retrieved from previous contracts archived in ProjectWise. Since Location sketches can widely vary from one project to another, there is no formal updating or archiving of this information.

Every project that has a location sketch needs to show and label all construction centerlines, detours, and haul routes.

Project limits are to be referenced to county mileposts based on the Department's master milepost index. The location sketch is to show the overall layout of the main line, ramps, frontage roads, and street locations. County roads and city streets shall be shown and labeled if they are important to the project. Do not show county roads and city streets just to "fill up" the sheet. As with all plan sheets, delete anything that does not add value to the plan sheet or provide detail or information that the reader needs.

Location sketches should normally be drawn at a scale to permit the full use of one sheet for all features. However, the scale of the location sketch shall be large enough to easily identify all construction lines and appropriate local and private roads. Do not reduce the scale in an effort to "squeeze" it all onto one sheet.

Location Sketch Particulars. Specific information for components on the location sketch as follows:

1) Alignments for roads, interchanges, frontage roads, detours and temporary connections to be constructed, improved, or removed are to be included. All alignments, including those for detours and temporary connections, shall be annotated with their associated identity.

2) Begin/End project is indicated by station with a leader/arrow extending to the particular point on the alignment. Provide the project number and indicate "Begin Project" or "End Project".

3) Contact information is placed in the lower right hand corner of the Location Sketch. Provide the names and phone numbers for the Project Manager, Project Coordinator, and the Designer.

4) Material site(s) are designated by the Materials Division and are approved by R/W. Electronic versions of these sites are available on ProjectWise at pw:\\pwintsrv1.dot.state.nv.us:NDOTPW\Documents\Divisions\037_RightOfWay\MaterialSites\. When the material site is within the project limits, only the relationship of the site needs to be drawn to demonstrate approximate location in relation to alignment. It does not need to be drawn in detail because the sketch is made part of the Special Provisions, which is shown in greater detail. Material sites that are beyond the project limits need to be shown as a general map indicating the location and distance to the material site. Do not show commercial material sites.

5) Milepost tabulation information is available in the Milepost Index at http://intra/MPI_Web_Report/. The milepost tabulation provides a table of the stations, mileposts, a column for county cumulative mileposts for projects that core data is provided, and a description. Items to be included are begin/end construction, begin/end project, structures, and mileposts within the project limits.

6) North arrow is shown on the location sketch and provides orientation. If township and range lines do not appear on this sheet then this information must be included on the north arrow.

7) Project number and county is in the upper right-hand corner of the sheet. List pertinent counties where the project is located.

8) Scale bar is in the lower middle section of the sheet and provides a reference to the length in miles or feet.

9) Section net is provided by the Location Division and provides the sections, townships and ranges through which the project limits traverse.

10) Sheet numbering for the location sketch shall begin with number 1A. When multiple title sheets and location sketches are used the numbering system would be 1, 1A (for title sheets) and 1B, 1C (for location sketches).

11) Station equations shall be shown on the location sketch. Show station equations with a leader line to the approximate point on the sketch (by stationing). If there is insufficient room on the location sketch to clearly identify the equation and exception areas, they may be shown in tabular form (data box) on the location sketch.

12) Structure numbers for bridges shall be identified with the appropriate structure number. The mileposts of these structures are contained in a flag and points to the appropriate structure. The Bridge Division assigns the structure numbers (e.g. I-1234, G-5678). Refer to the current Structure Index book for existing structure numbers. Culverts with assigned structure numbers are not shown on the Location Sketch, but only on the plan sheets.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

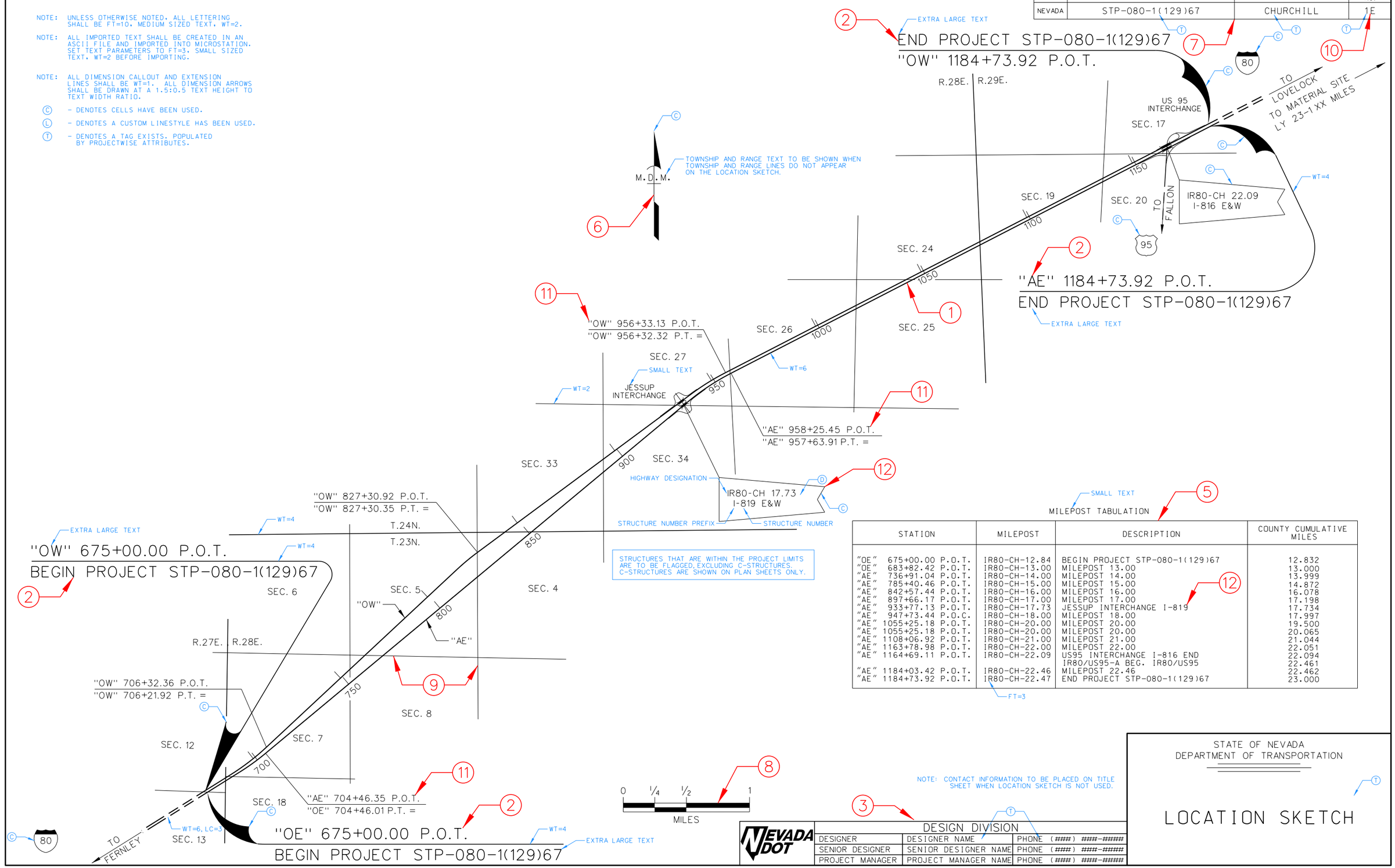
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS. POPULATED BY PROJECTWISE ATTRIBUTES.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STP-080-1(129)67	CHURCHILL	1E



STRUCTURES THAT ARE WITHIN THE PROJECT LIMITS ARE TO BE FLAGGED, EXCLUDING C-STRUCTURES. C-STRUCTURES ARE SHOWN ON PLAN SHEETS ONLY.

SMALL TEXT

MILEPOST TABULATION

STATION	MILEPOST	DESCRIPTION	COUNTY CUMULATIVE MILES
"OE" 675+00.00 P.O.T.	IR80-CH-12.84	BEGIN PROJECT STP-080-1(129)67	12.832
"OE" 683+82.42 P.O.T.	IR80-CH-13.00	MILEPOST 13.00	13.000
"AE" 736+91.04 P.O.T.	IR80-CH-14.00	MILEPOST 14.00	13.999
"AE" 785+40.46 P.O.T.	IR80-CH-15.00	MILEPOST 15.00	14.872
"AE" 842+57.44 P.O.T.	IR80-CH-16.00	MILEPOST 16.00	16.078
"AE" 897+66.17 P.O.T.	IR80-CH-17.00	MILEPOST 17.00	17.198
"AE" 933+77.13 P.O.T.	IR80-CH-17.73	JESSUP INTERCHANGE I-819	17.734
"AE" 947+73.44 P.O.C.	IR80-CH-18.00	MILEPOST 18.00	17.997
"AE" 1055+25.18 P.O.T.	IR80-CH-20.00	MILEPOST 20.00	19.500
"AE" 1055+25.18 P.O.T.	IR80-CH-20.00	MILEPOST 20.00	20.065
"AE" 1108+06.92 P.O.T.	IR80-CH-21.00	MILEPOST 21.00	21.044
"AE" 1163+78.98 P.O.T.	IR80-CH-22.00	MILEPOST 22.00	22.051
"AE" 1164+69.11 P.O.T.	IR80-CH-22.09	US95 INTERCHANGE I-816 END IR80/US95-A BEG. IR80/US95	22.094
"AE" 1184+03.42 P.O.T.	IR80-CH-22.46	MILEPOST 22.46	22.461
"AE" 1184+73.92 P.O.T.	IR80-CH-22.47	END PROJECT STP-080-1(129)67	22.462
			23.000

FT=3

NOTE: CONTACT INFORMATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED.

DESIGN DIVISION

DESIGNER	DESIGNER NAME	PHONE (###) ###-####
SENIOR DESIGNER	SENIOR DESIGNER NAME	PHONE (###) ###-####
PROJECT MANAGER	PROJECT MANAGER NAME	PHONE (###) ###-####

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LOCATION SKETCH

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-395(001)	WASHOE	1F

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

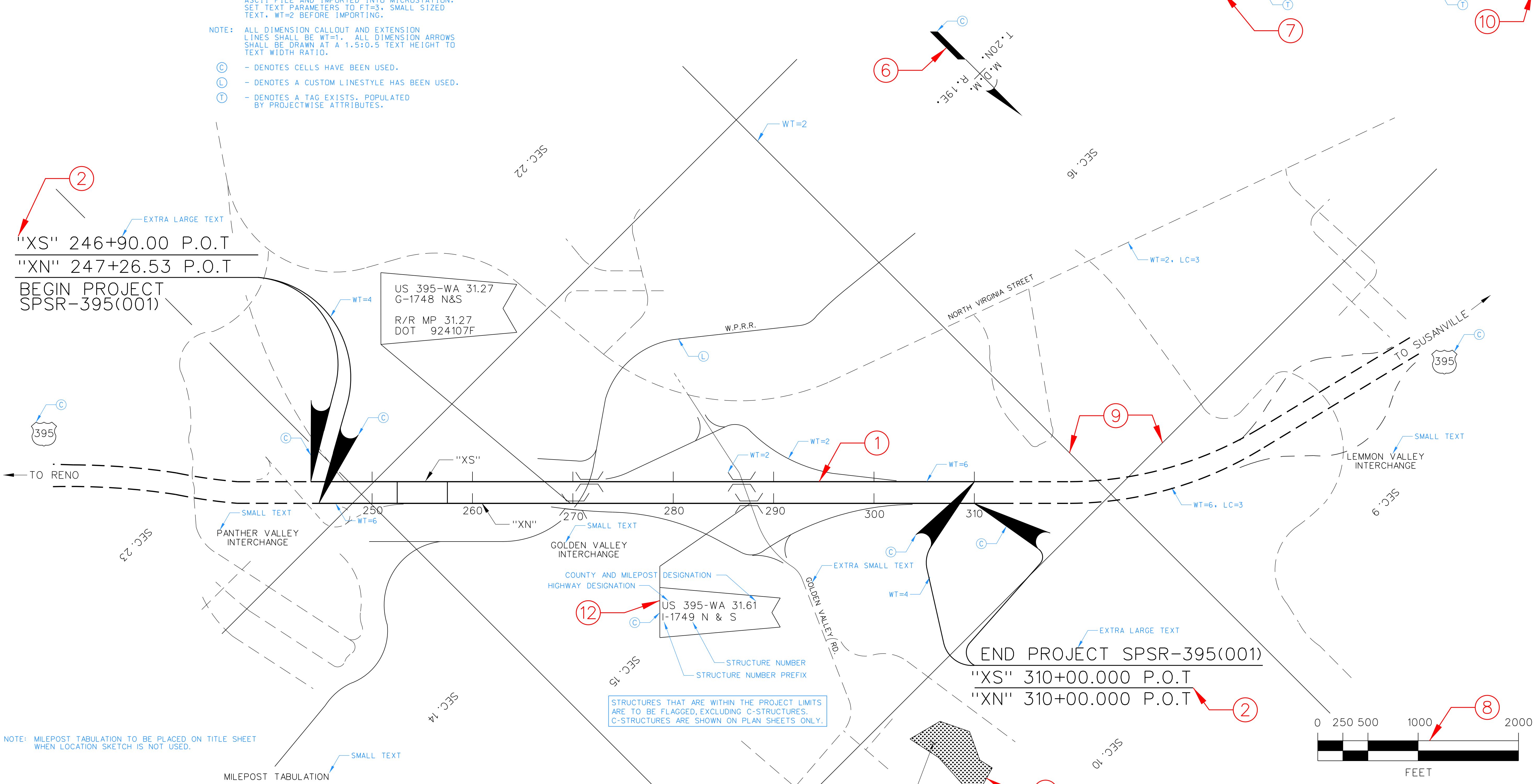
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS. POPULATED BY PROJECTWISE ATTRIBUTES.



NOTE: MILEPOST TABULATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED.

MILEPOST TABULATION

STATION	MILEPOST	DESCRIPTION	COUNTY CUMULATIVE MILES
"XN" 247+26.53 P.O.T.	US 395-WA 30.83	BEGIN PROJECT	72.022
"XN" 256+24.13 P.O.T.	US 395-WA 31.00	MILEPOST 31	72.264
"XN" 270+39.65 P.O.T.	US 395-WA 31.27	STRUCTURE G-1748 N&S	72.508
"XN" 288+37.06 P.O.T.	US 395-WA 31.61	STRUCTURE I-1749 N&S	72.523
"XN" 309+04.13 P.O.T.	US 395-WA 32.00	MILEPOST 32	73.011
"XN" 310+00.00 P.O.T.	US 395-WA 32.02	END PROJECT	73.511

SMALL TEXT (5) — FT=3 — (12)

(3) NOTE: CONTACT INFORMATION TO BE PLACED ON TITLE SHEET WHEN LOCATION SKETCH IS NOT USED.

NEVADA DOT

DESIGN DIVISION		
DESIGNER	DESIGNER NAME	PHONE (###) ###-####
SENIOR DESIGNER	SENIOR DESIGNER NAME	PHONE (###) ###-####
PROJECT MANAGER	PROJECT MANAGER NAME	PHONE (###) ###-####

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LOCATION SKETCH

3.0 Typical Sections.

General. The Materials Division provides structural sections that are requested by Roadway Design. Typical sections are for the purpose of depicting the structural elements of the roadway. They should not contain information concerning geometric elements, which can be adequately shown on the plans or geometric sheets. Typical sections shall be a graphic representation of the work to be performed.

Typical Section Guidelines. In most cases, the vertical scale of the sections should be exaggerated to clarify thickness of the various layers of the structural section. Use an appropriate H/V ratio to clearly depict details as necessary. Typical sections should be drawn in such a fashion that it minimizes the amount of "white space" on the sheet.

Horizontal dimension of the typical sections shall be expressed in feet with accuracy to the tenth of a foot (0.1'). Vertical dimension of the typical cross sections shall be expressed in inches with accuracy to the quarter of an inch (¼"), excluding ditches, which are expressed in feet (e.g. 1.0 or 1.5 ditch).

Horizontal dimensions should be referenced to the control line. On new construction, or reconstruction, cross slopes on pavement surfaces are to be shown by percentage with an arrow and leader pointing in the direction of the slope. When perpetuating existing slopes, indicate "Match Existing" with an arrow and leader pointing in the downward direction of the slope. If dimensions vary, give the minimum to maximum values. Side slopes are to be identified as horizontal to vertical (e.g. 6:1 F.S.). Super elevations are not shown on the typicals, but are detailed on the profile sheets.

Vertical transition shall be 1 inch per 100 linear feet for high speed roadways, greater than or equal to 45 mph posted speed. For low speed facilities, less than 45 mph posted speed, 1 inch per 50 linear feet shall be used. Transitions around bridge structures should consider drainage. It is best to vertically transition 100' before and beyond the approach slab to avoid creating a ponding issue.

When there are multiple station-to-station entries under one typical, those entries are to be listed from the lowest stationing first and ascending down the sheet. Stationing is to be shown to the hundredth of a foot along with point type (e.g. (P.O.C.) point on curve, point of curvature (P.C.), point on tangent (P.O.T.), point of tangency (P.T.), etc.). It is important that station-to-station entries do not have "gaps." Gaps in stationing should be noted as area of exception, commonly over bridge structures, which in this case would be noted with a structure number and the corresponding stationing (e.g. Structure B-1234 Exception Area). Stationing should be connective and in logical order from sheet to sheet.

In areas where there are several station-to-station entries with varying widths, it is acceptable to show the min.~ max. widths above the dimension lines and reference roadway widths and stationing to the base and surface sheets. This is in an effort to reduce the potential discrepancies between the base and surface sheets and the station to station entries in the typicals. When implementing this concept, care should be taken to provide adequate information so the substitution of the station to station entries on the typicals can stand alone in the summary sheets. For new construction or major reconstruction, it is recommended to show stationing in both the typicals and summary sheets if deemed appropriate.

Where new surfacing is to be placed on existing pavement, the bottom of the new surfacing which is to be in contact with the existing pavement shall be shown as a dashed line (shown in the Section of Improvement).

Addressing shoulder widening for guardrail or barrier rail in the typical sections is usually not required. The Standard Plans depict the placement detail for guardrail and barrier rail and they should not routinely be repeated on the typical sections. The typical sections are meant to show the structural section that is to be constructed with the project. The plans sheets and the structure list identify the location of guardrail and barrier rail. This, in conjunction with the Standard Plans, should be sufficient for identifying their location and construction thereof.

Right of way widths are not normally shown on the typicals if they can be adequately addressed in the plans or right of way sheets.

Typical Section Particulars. Specific information for components on the typical sections as follows:

1) Safety Edge is required when no other adjacent vertical feature will retain the sloughing of the bituminous material. The safety edge also prevents a steep drop-off from forming if shouldering material erodes away. Safety edges are based off a 30° angle relative to the slope of the road. Safety edge is to be placed on the final lift of dense-graded surface. A safety edge is not necessary if the pavement edge is under or behind guardrail. Safety edges are not used on PCCP.

2) Angle of repose is required when no other adjacent vertical feature will retain the sloughing of the bituminous material and when a safety edge is not used. Angle of repose is based on a 2H:1V slope. Angle of repose is not calculated for open-graded surface. PCCP is constructed vertically, therefore no angle of repose is shown or calculated.

3) As-Constructed is used for portraying the existing roadway prism, usually extending from the control line to the toe of slopes or back of curb. The As-Constructed demonstrates any surface preparation necessary to accommodate the Section of Improvement. For example, cold milling would be shown on the As-Constructed followed by the Section of Improvement. The Section of Improvement would show the new bituminous layers. The existing base and surface should be labeled as "Base and Surface" with arrows and leaders pointing to the respective layers. All lines that are used to show the As-Constructed shall be solid.

4) Control line should always be horizontally referenced and dimensioned to the respective roadway features. Dimensioning from one roadway feature to another roadway feature is acceptable, but it must have at least one tie to the control line. The appropriate alignment designation(s) should be shown next to the control line ("CL"). The control line should be dashed and projected from the As-Constructed to the Section of Improvement to show the relation of the two typicals. If there is a different control line from the As-Constructed to the Section of Improvement, then their relationship must be shown.

5) Cold milling below top of gutter pan needs to be dimensioned vertically at the front edge of gutter/edge of oil. The depth of cold milling needs to be referenced from "top of gutter". For example, the dimension would say "2 ¾" cold milling below top of gutter."

6) Cold milling details can be used to address varying widths around median turn pockets, islands, other unusual shapes, and at intersections. These details reduce multiple and complex station-to-station entries on the typicals. Dimension these areas on the typicals as "varies" with min.~ max. limits. Place a note on the typicals referring to the appropriate sheet (e.g. "For cold milling details see sheets SP1-SP9"). Cold milling details may be shown in the typicals if they are incidental to the project. Where multiple sheets are required to show the cold milling details, it is better to use the site preparation plans to depict this information.

7) Project Number and county need to be shown in the upper right corner and placed in the appropriate designated boxes.

8) Curb and gutter should be labeled with the appropriate type and dimensioned from the front edge of gutter/edge of oil to the control line. Dimensioning to the edge of gutter allows the pavement widths to match the base and surface sheets. When calling out new curb and gutter, the offset dimension is measured to the front face of curb (see Standard Plans). When encountering short sections of existing curb and gutter in an otherwise predominant edge of oil section, a note along with a drop down could be used to show this edge feature to handle cold milling and paving against the curb. In lieu of using station-to-station entries under the curb and gutter drop down a note could be used to say "See plan sheets for locations."

3.0 Typical Sections (Continued).

9) Cross slope of the roadway should be indicated on the typicals with a leader and arrow pointing in the downward sloping direction. For new construction (Section of Improvement), the cross slope should be designated by percent, typically 2%. On maintenance overlays, the cross slope is usually perpetuated and labeled as “match existing.” Any slope less than 1.5% requires approval of the Chief Hydraulic Engineer.

10) Depth of cold milling and paving is labeled with an arrow and leader. Usually, plantmix bituminous materials are labeled above the bituminous courses and base layers are labeled below. Do not use legends to portray depths of removal sections or bituminous layers.

11) Dimensioning should be from the control line to the edge of oil. In a curb or gutter section, dimensioning would be from control line to the front edge of curb or gutter in order to match the widths on the summary sheets. When calling out new curb and gutter, the offset dimension is measured to the front face of curb (see Standard Plans). Longitudinal sections are dimensioned from station to station with corresponding lengths shown above.

12) Ditches and slopes are to be shown on the typicals for new construction, rehabilitation of existing, or when the profile sheets call out ditch notes. The ditches are to be dimensioned from the flow line to the projected dense-graded surface. Generally, ditches are shown on the left side of the typicals and the right is reserved for fill slopes. Construction of new slopes shall be designated with min.~max. slope ratios. Existing slopes to receive shoulder material would be designated with “Slope” on the as-constructed and “Exist Slope” on the Section of Improvement. Changes in slope ratio should be transitioned a minimum distance along the edge of the road 50 feet for every unit change in ratio. For example, a 200-foot or greater transition length would be required to change from a 2:1 fill slope to a 6:1 fill slope.

13) Drop down sections are usually required when addressing edge features that are not predominant to the overall composition of the roadway. For example, a drop down would be used in a short section of curb and gutter to address the additional milling depth to accommodate the open-graded surface. Other examples of drop downs would be to address paving of adjacent ditches, minor widening, etc.

14) Exception areas are to be listed within the station-to-station entries and accompanied with an explanation. For example, “X” 10+00.00 to “X” 11+00.00 (Structure B-1234)(Exception area). Where there is a gap in stationing because that section is a separate typical shown on a different sheet, reference to the sheet number should be included under the station-to-station entries.

15) Existing base and surface should be labeled with an arrow and leader below the typical section. In the As-constructed the existing base and surface is drawn with solid lines. However, under the Section of Improvement, the existing base and surface becomes a dashed line to represent existing.

16) Half Section of Improvements are usually used for showing different pavement strategies or depths, when they are different from one side of the road to another.

17) Islands (raised medians) should be shown on the typicals with appropriate minimum and maximum width along with the cross slope. Usually, the min.~max. dimensions are referenced to the geometric sheets for actual widths and locations. It is not necessary to show the types of island paving on the typicals since it is covered in the Standard Plans, special details, or landscaping plans.

18) Intersection details show the transition or the change in profile through an intersection where the structural section would adversely change the approach of a cross street. These details may be shown in the typicals or as a detail in the plans, and may require a longitudinal section to adequately show this information. Intersection details are primarily used in non-curb and gutter sections where the overlay changes the finished grade elevation. In contrast, this detail is usually not needed in curb and gutter section because mainline is usually cold milled and repaved to match the existing profile.

19) Legends are normally used to depict methods of removal, pulverization, or modification. Depths of removals and bituminous surfaces should be directly labeled with a leader and arrow rather than specified in the legend. The Legend box is placed in the upper left corner of the typicals.

20) Longitudinal sections are shown when depicting varying depths. Longitudinal sections are generally used for demonstrating deeper milling depths when showing the end of a full structural section (begin/end project) transitioning the overlay portion into the existing surface (begin/end construction). It is recommended that when transitioning at structures, to hold a constant depth a minimum of 100 feet before and after the approach slab before transitioning back up to the new finished grade elevation.

21) Modified sections are used for portraying alterations to the existing cross slope of the roadway. For example, when removing an existing median island and replacing it with a new structural section, this would be labeled “Modified.” Modified sections are also used on longitudinal sections when altering the existing profile of the roadway. For example, when the cold milling depth is increased near bridge structures, changing the profile, the longitudinal section would be labeled “Modified.” In other cases, a modified section may also be used when trying to portray multiple steps in rehabilitating the roadway surface. It would usually be followed by a Section of Improvement to address the placement of bituminous material.

22) Open-graded surface shall be flush with curb and gutter. If applicable, there should be a note under the Legend “Finished grade of ¾” Open-Graded Bituminous Surface shall be transitioned to match existing pavement surface at street intersections.” The open-grade should be flush with the top of surface drainage inlets on bicycle routes and bicycle lanes and/or where the inlets encroach into a travel lane. In some cases, special details will be necessary to modify existing drainage facilities. In snow removal areas the open-grade should be placed full width to eliminate drop-offs, grade breaks and other undesirable features that cause the snow removal equipment to snag and/or grade off plane.

23) Pavement reinforcing fabric or geotextile needs to be shown to the relative position within the roadway section and dimensioned appropriately to show widths and locations.

24) Profile grade is shown at the top of the finished grade surface and is required to be shown on typical sections for new construction. Profile grade is usually shown when substantially modifying the vertical profile and is accompanied with profile sheets. It is not necessary to reference profile grade on the typicals for most pavement rehabilitation methods or when transitioning milling or paving depths.

25) Roadbed modification generally produces an additional 1-foot of widening as a result of the pulverizing and processing on each side of the roadway to facilitate construction. As a result of this process, the Section of Improvement should be dimensioned to reflect this additional widening. The dense graded and open graded surfaces are extended to accommodate the additional widening. The additional 1-foot widening is subject to variations to the existing width of the shoulder and terrain. Consideration of the additional widening should be discussed during the PDFS.

26) Sawcut lines should be shown and dimensioned on the typicals. Since there is usually no payment for sawcut the text should read “Sawcut (no direct payment).”

27) Seal coats are to be shown on the typicals when applied to the bituminous surface. This generally occurs when the surface does not receive open-graded surfacing.

28) Sections are for addressing miscellaneous areas such as patching details, approaches, minor widening, paving of median islands, etc. The cut section is usually designated with an “A-A” and references the corresponding plan sheet.

3.0 Typical Sections (Continued).

29) Section of Improvement is used to portray the finished product of the roadway surface. Any new base or bituminous layers are shown with appropriate widths and depths. Use green dashed lines to define existing surfaces.

30) Sheet numbering for the typical sections shall begin with number 2. Multiple typical section sheets shall be numbered 2, 2A, 2B, 2C, etc.

31) Shoulder widening of an additional 1-foot is required beyond the edge of pavement.

32) Sidewalks may be shown on the typicals as required. Generally, if work is being performed on the sidewalk, it can be portrayed and labeled "(width) sidewalk, see plans for locations."

33) Stationing should be shown under the Section of Improvement. It is not necessary to repeat stationing both under the As-constructed and the Section of Improvement unless specifically warranted. Stationing should be to the hundredth of a foot and accompanied with the appropriate point type (e.g. P.O.C, P.O.T., etc.). In an effort to reduce station-to-station entries, stationing will be omitted from the typicals when the entries become extensively long. A note referencing the stationing and widths would be provided (e.g. "See Summary Sheets for stations and widths.")

34) Varying widths are to be shown with the minimum and maximum widths above the dimension arrow. In an effort to reduce station-to-station entries on the typicals, the roadway widths should be referenced with a note (e.g. "See Summary Sheets for stations and widths."). Optionally, a circled letter may be placed above the variable dimension for reference to the station-to-station entries. The variable widths are then tabulated and placed below the typical with the corresponding letter designation.

35) Witness lines are generally used for showing the relation of the As-Constructed to the Section of Improvement, usually when addressing widening from the normal edge of pavement. For example, witness lines should be extended from the As-Constructed saw cut line to the Section of Improvement to show the relation of widening at a glance. In most cases, control line should also extend from the As-Constructed to the Section of Improvement to show proper relation of the two typicals.

Not Required:

Roadside edge features such as barrier rail or guardrail do not need to be shown on the typicals unless there is a need to address something that is not shown in the Standards. For example, the construction of new guardrail would not need to be shown on the typical because there is adequate detail in the Standard Plans for construction. The same is true when removing such roadway features. Other examples of roadway edge features that do not need to be shown are plantmix dike and sidewalk.

Plantmix type is not required on typicals. The bid item, theoretical applications, and the Special Provisions adequately cover plantmix type. However, when the use of leveling courses and different asphalt types are used to make up the composition of the various surfaces, the asphalt type shall be noted under the respective bituminous layer.

Other:

On roadbed modifications, the pulverization bid item is calculated using the existing roadway width (including the angle of repose). The bid item for "Processing for Roadbed Modification" and "Portland Cement" is calculated using the additional 1' width (or finished roadway width).

When the majority of the section consists of barrier rail, curb, gutter, and sidewalk, it is acceptable to show these features on the typicals. In special situations, such as non-standard placement of longitudinal barriers, it may be shown on the typicals when required.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-050-2(103)5	WHITE PINE	2

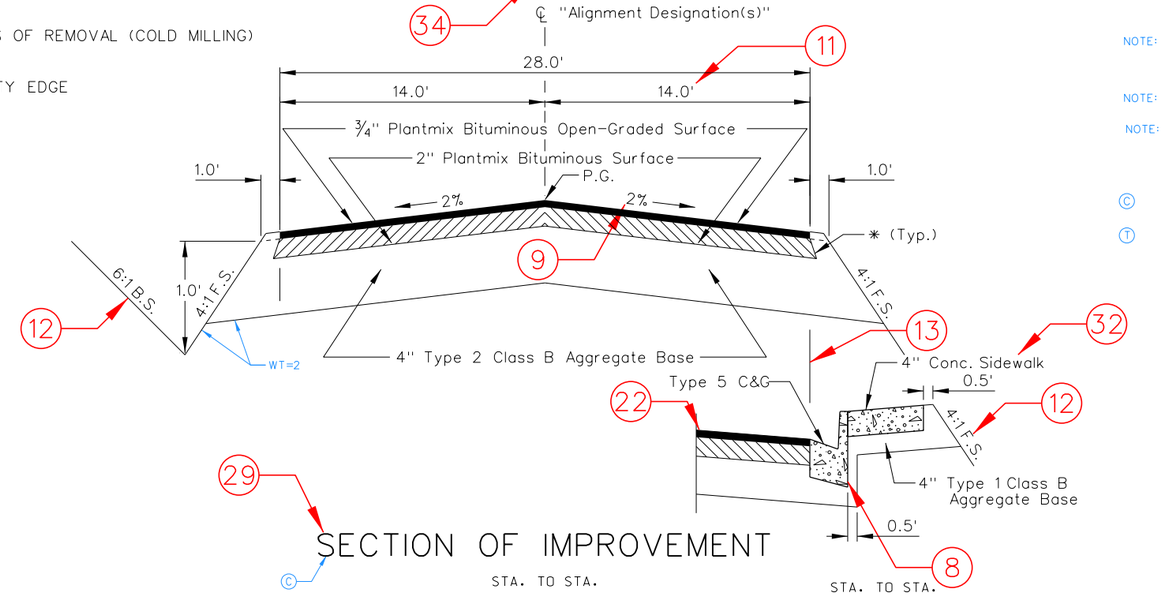
LEGEND

1 SHOULDERING MATERIAL (AS DIRECTED BY THE ENGINEER)

LIMITS OF REMOVAL (COLD MILLING)

SAFETY EDGE

NOTES:
1. OPEN-GRADED SURFACE TO BE PAVED FLUSH WITH CURB AND GUTTER.
2. SEE SUMMARY SHEETS FOR STATIONS AND WIDTHS



SECTION OF IMPROVEMENT
STA. TO STA.

STA. TO STA.

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE DRAWN AT A 1:6 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

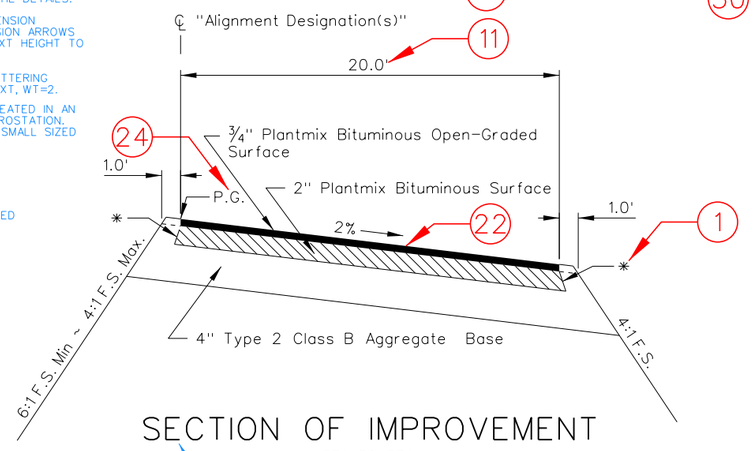
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

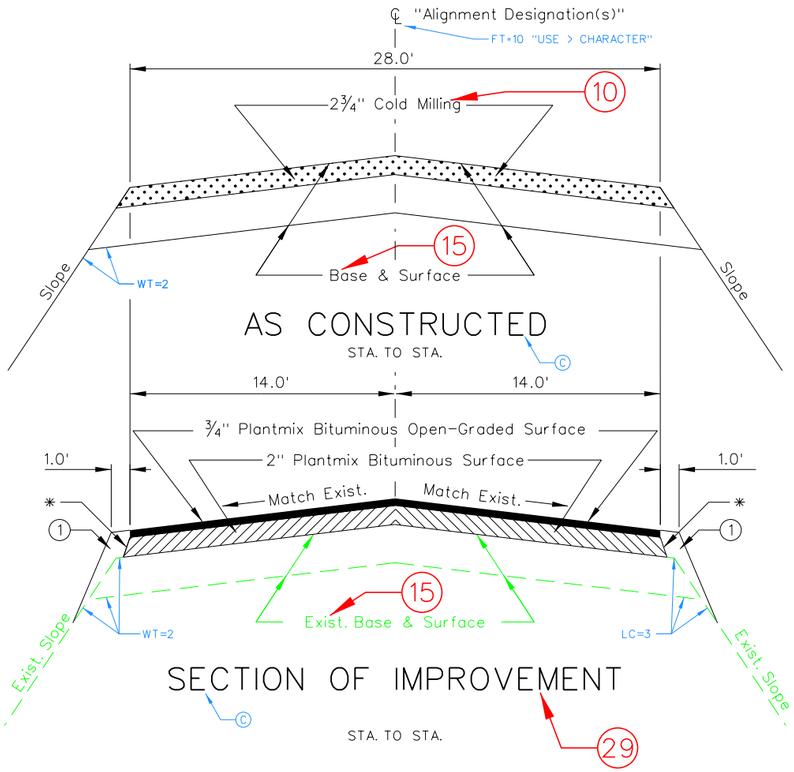
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

© - DENOTES CELL HAS BEEN USED

Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

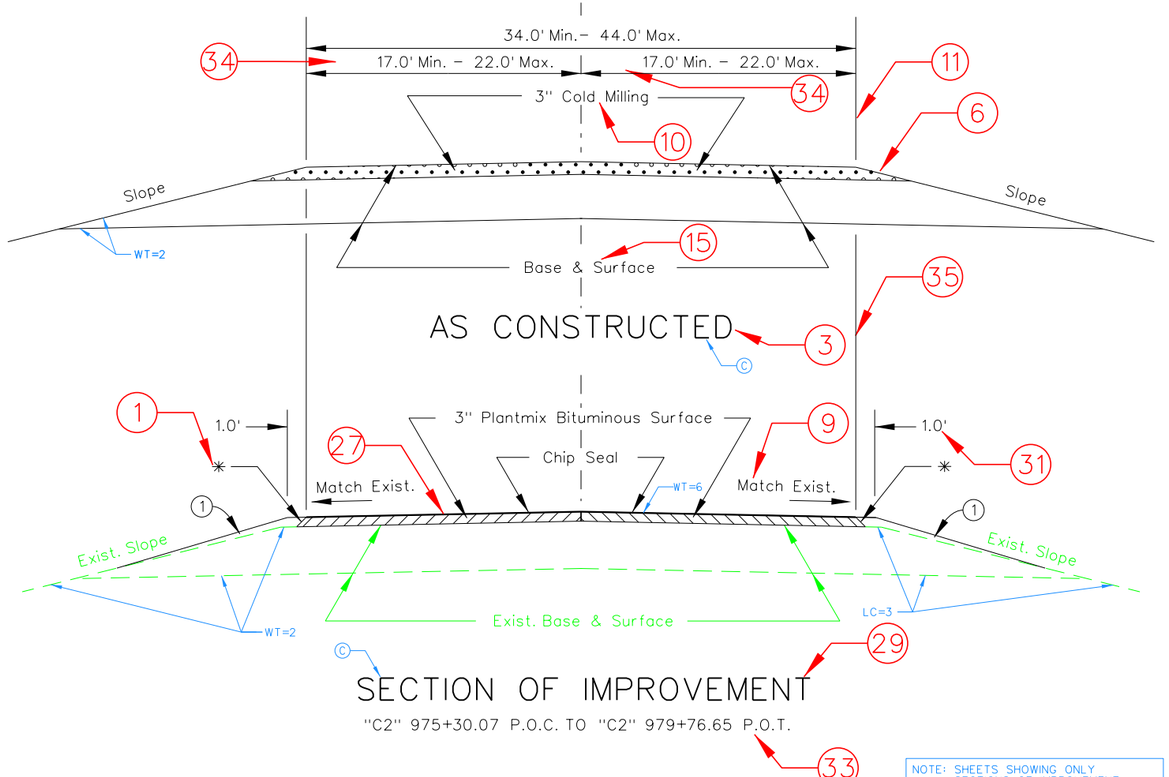


SECTION OF IMPROVEMENT
STA. TO STA.



AS CONSTRUCTED
STA. TO STA.

SECTION OF IMPROVEMENT
STA. TO STA.



AS CONSTRUCTED
STA. TO STA.

SECTION OF IMPROVEMENT
"C2" 975+30.07 P.O.C. TO "C2" 979+76.65 P.O.T.

NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	2A

LEGEND – (19)

- LIMITS OF REMOVAL (COLD MILLING) (C)
- LIMITS OF ROADWAY EXCAVATION (C)
- SAFETY EDGE (C)
- (1) – SHOULDERING MATERIAL (AS DIRECTED BY THE ENGINEER) REFERENCE SD-05 FOR ROCK MULCH STABILIZATION DETAIL

NOTES:

1. SEE SUMMARY SHEETS FOR STATIONS AND WIDTHS (34)

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE DRAWN AT A 1:6 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

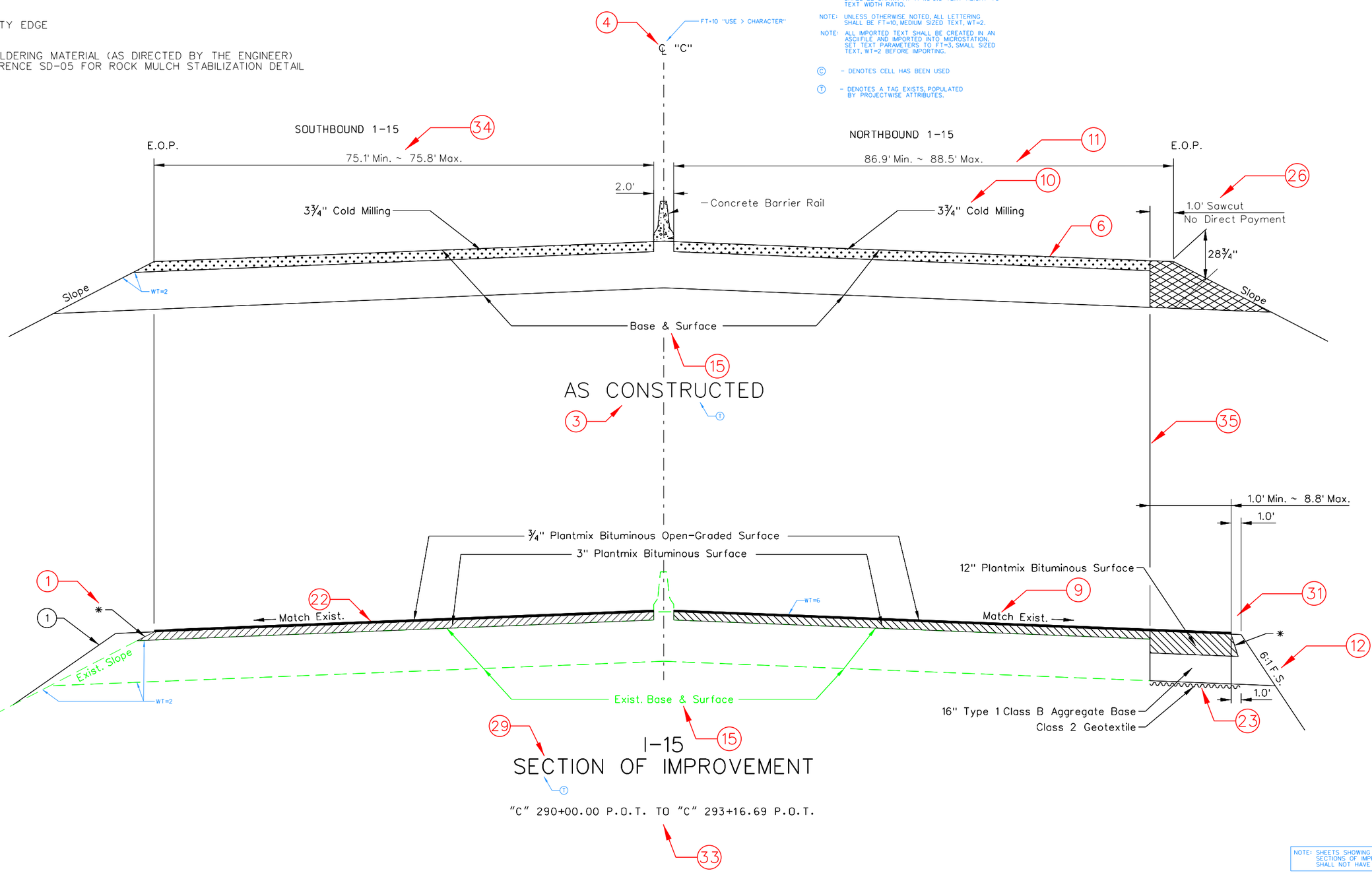
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1, ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

(C) – DENOTES CELL HAS BEEN USED

(T) – DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	AC-IM-080-4(067)305	ELKO	2B

7 (PROJECT NO.) 30 (SHEET NO.)

– LEGEND – 19

- LIMITS OF REMOVAL (COLD MILLING) (C)
- LIMITS OF PULVERIZATION (C)
- LIMITS OF ROADBED MODIFICATION (C)

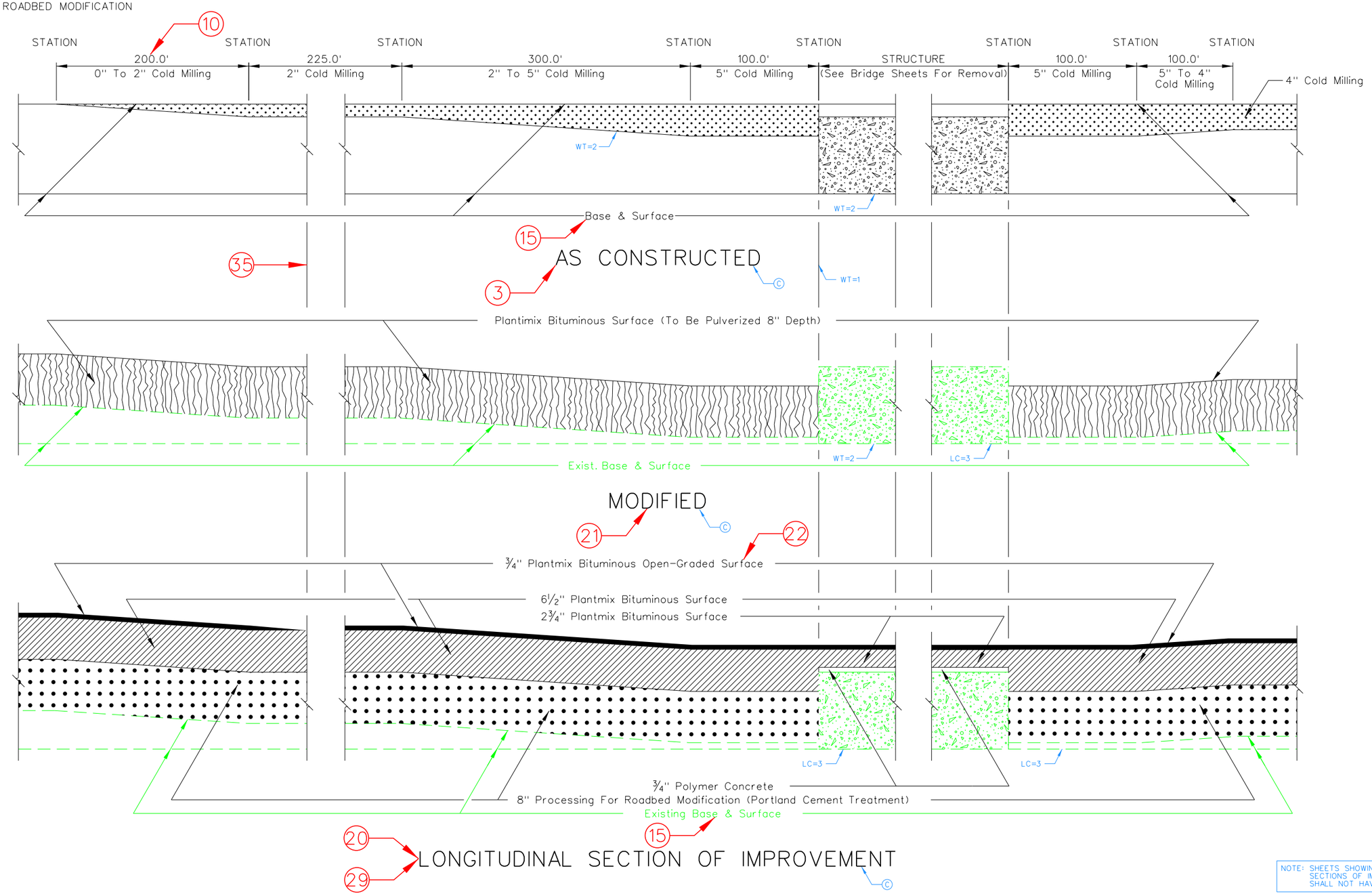
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

(C) – DENOTES CELL HAS BEEN USED

(T) – DENOTES TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-225(1)	ELKO	2C

19 LEGEND ©

LIMITS OF REMOVAL (COLD MILLING)

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE DRAWN AT EITHER A 1:3, 1:4 OR A 1:10 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

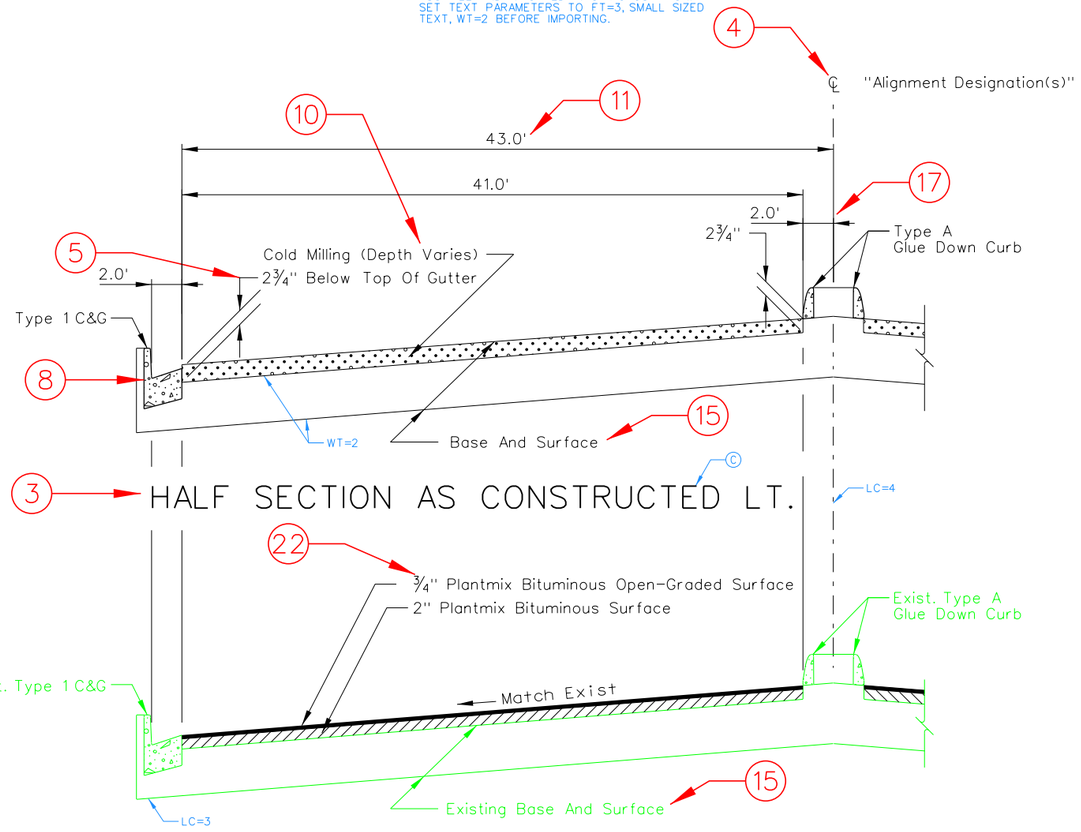
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

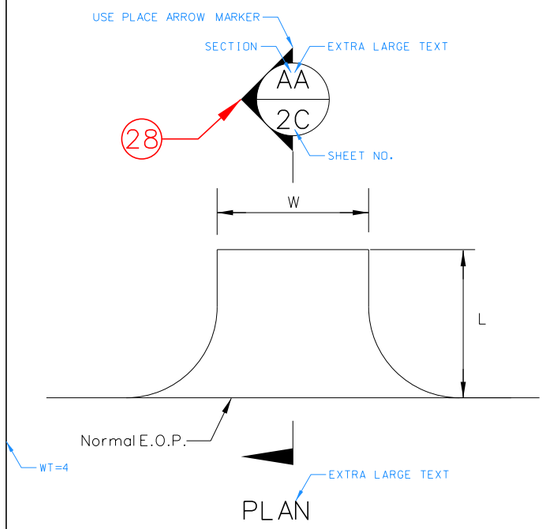
NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

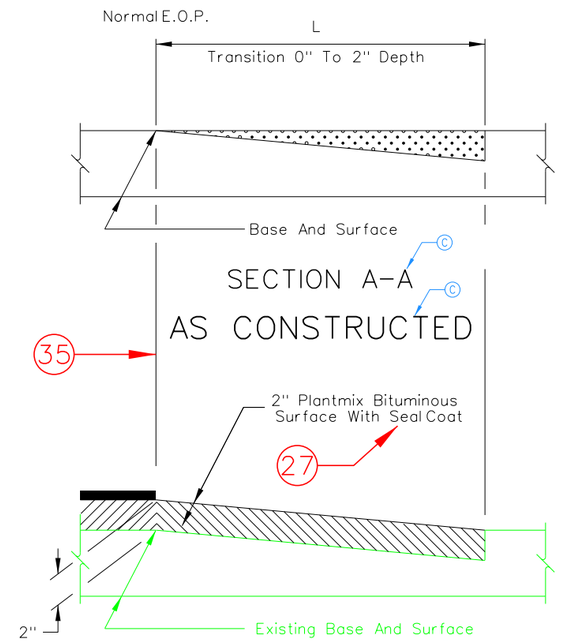
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

© - DENOTES CELL HAS BEEN USED.

Ⓣ - DENOTES A TAG EXISTS. POPULATED BY PROJECTWISE ATTRIBUTES.







FOR (L) AND (W) SEE STRUCTURE LIST

METHOD OF PAVEMENT TRANSITION APPROACHES AND TURNOUTS

2X LARGE TEXT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS & SPECIAL DETAILS Ⓣ

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-0401(2)	ORMSBY	2D

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE DRAWN AT A EITHER A 1:5 OR 1:3 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

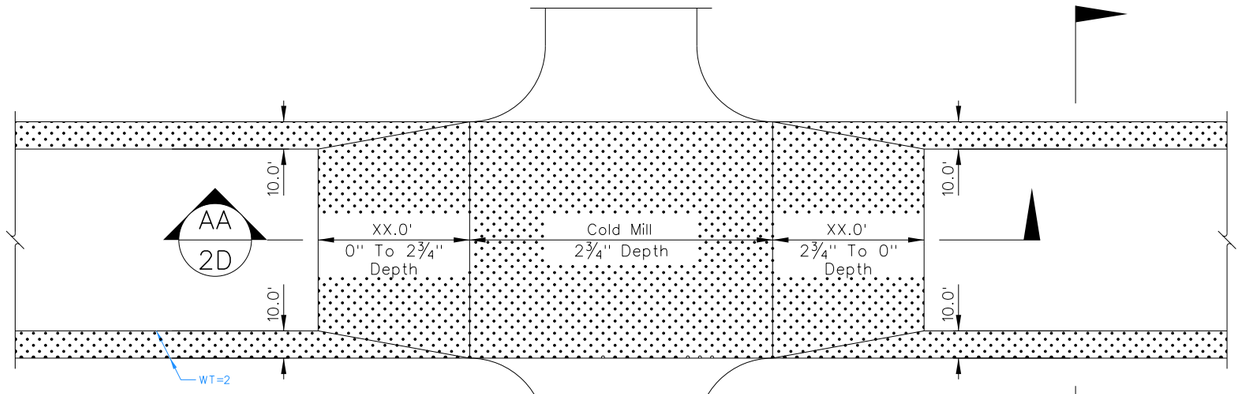
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

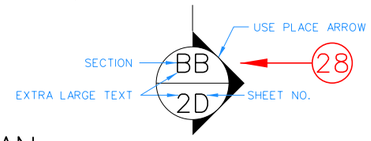
Ⓒ - DENOTES CELL HAS BEEN USED

Ⓣ - DENOTES A TAG EXISTS. POPULATED BY PROJECTWISE ATTRIBUTES.

LEGEND

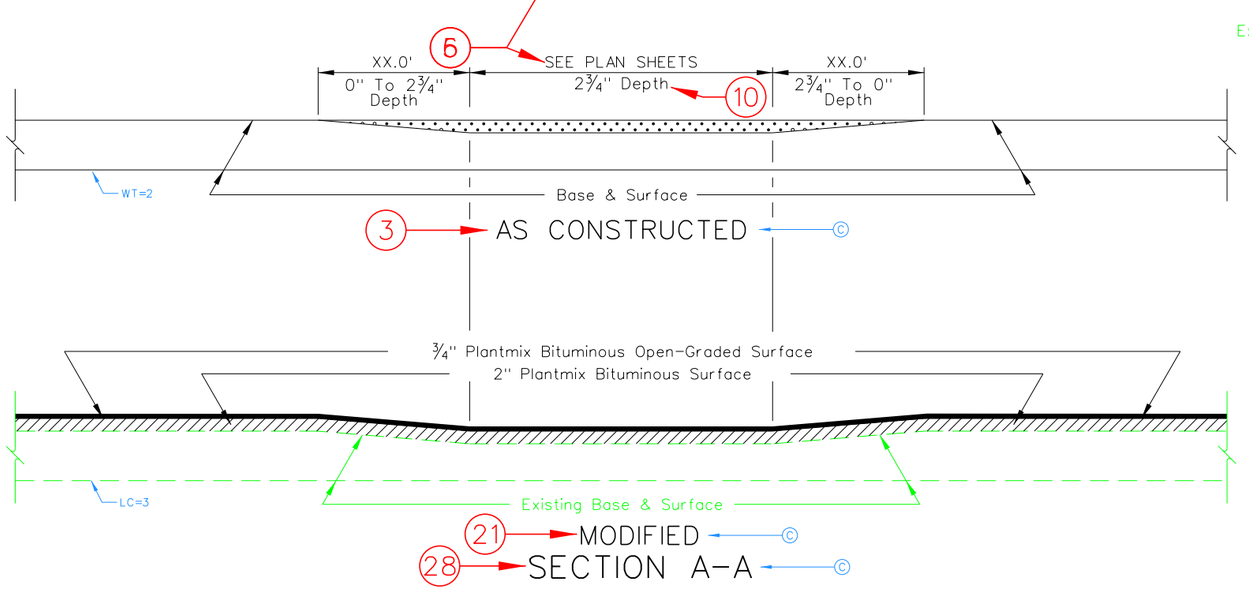
LIMITS OF REMOVAL (COLD MILLING)



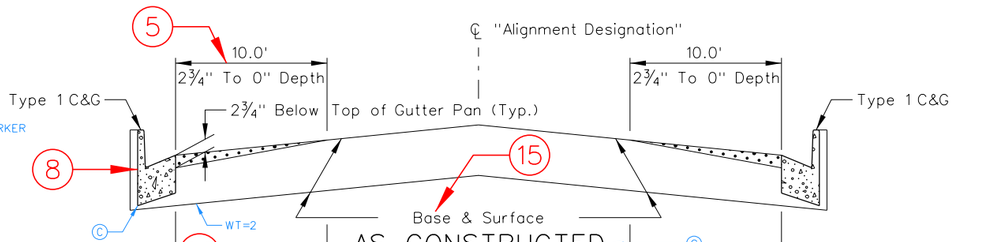


INTERSECTION COLD MILLING PLAN

2x LARGE TEXT



MODIFIED SECTION A-A



MODIFIED SECTION B-B

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION & SPECIAL DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	2E

LEGEND – (19)

- LIMITS OF REMOVAL (COLD MILLING) (C)
- LIMITS OF ROADWAY EXCAVATION (C)
- 30° SAFETY EDGE (C)
- (1) – SHOULDERING MATERIAL (AS DIRECTED BY THE ENGINEER) REFERENCE SD-05 FOR ROCK MULCH STABILIZATION DETAIL

REFERENCE SHEET 2L FOR DETAILS

E.C. – ELEVATION CONTROL (SEE NOTE 2)
N.B. – I-15 NORTHBOUND
S.B. – I-15 SOUTHBOUND

NOTES:

1. SEE SUMMARY SHEETS FOR STATIONS AND WIDTHS (34)
2. SEE ELEVATION CONTROL PLAN SHEETS 35-37
   E.C. N.B. AND E.C. S.B. ARE LOCATED AT TOP OF DENSE GRADE

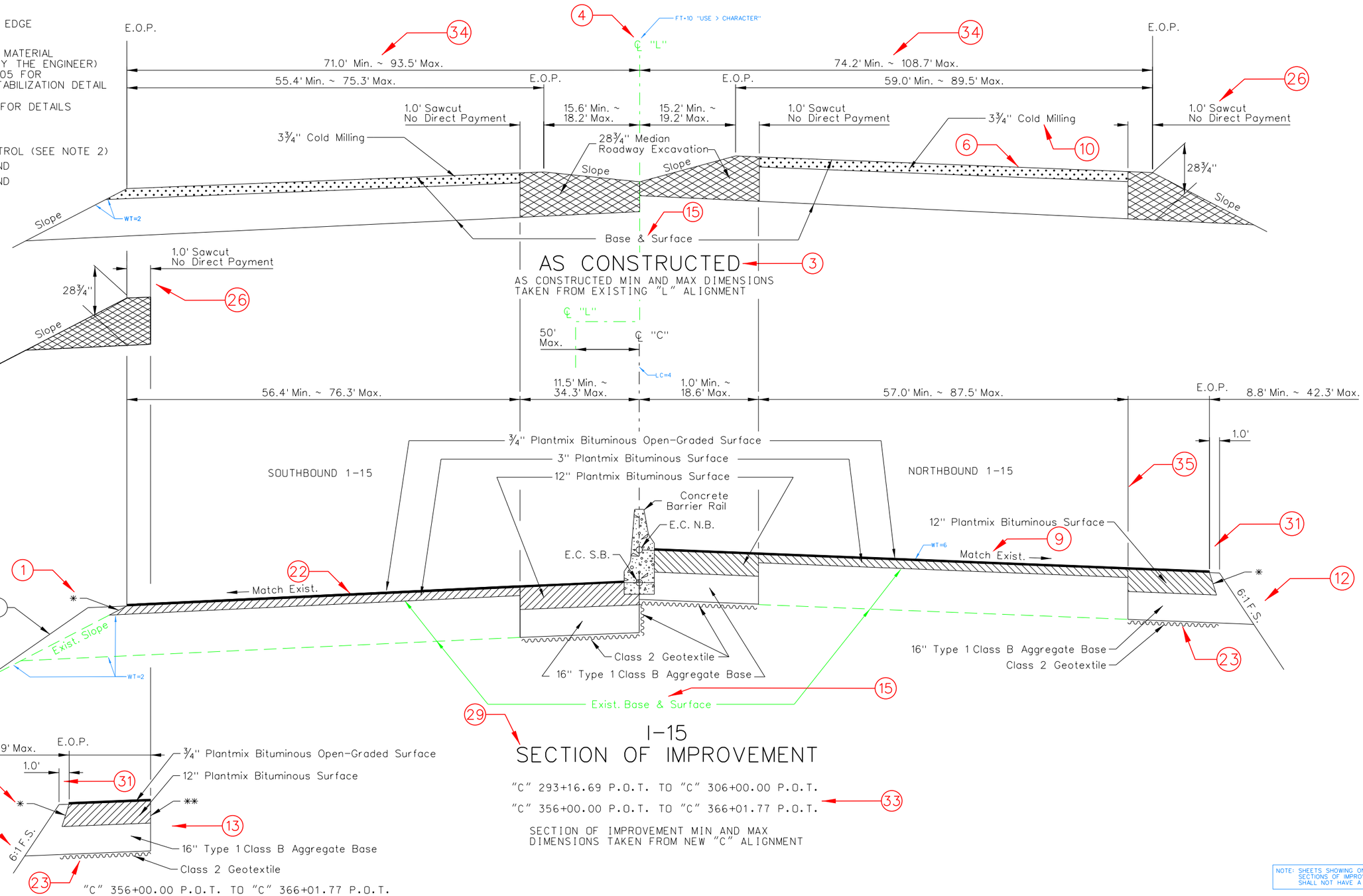
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

(C) – DENOTES CELL HAS BEEN USED

(T) – DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



I-15
SECTION OF IMPROVEMENT

"C" 293+16.69 P.O.T. TO "C" 306+00.00 P.O.T.
"C" 356+00.00 P.O.T. TO "C" 366+01.77 P.O.T. (33)

SECTION OF IMPROVEMENT MIN AND MAX DIMENSIONS TAKEN FROM NEW "C" ALIGNMENT

NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-756-1(379)4	DOUGLAS	2F

7 30

– LEGEND –

19

- LIMITS OF COLD RECYCLE (C)
- LIMITS OF REMOVAL (COMPOSITE SURFACE) (C)
- (1) SHOULDERING MATERIAL (AS DIRECTED BY THE ENGINEER) (C)
- ✳ SAFETY EDGE (C)

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE EITHER DRAWN AT A 1:3 OR 1:2 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

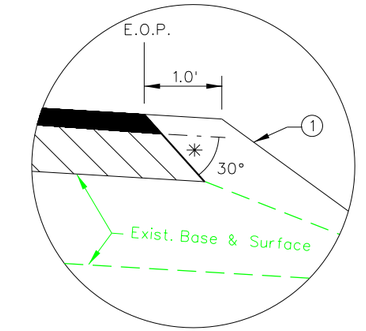
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

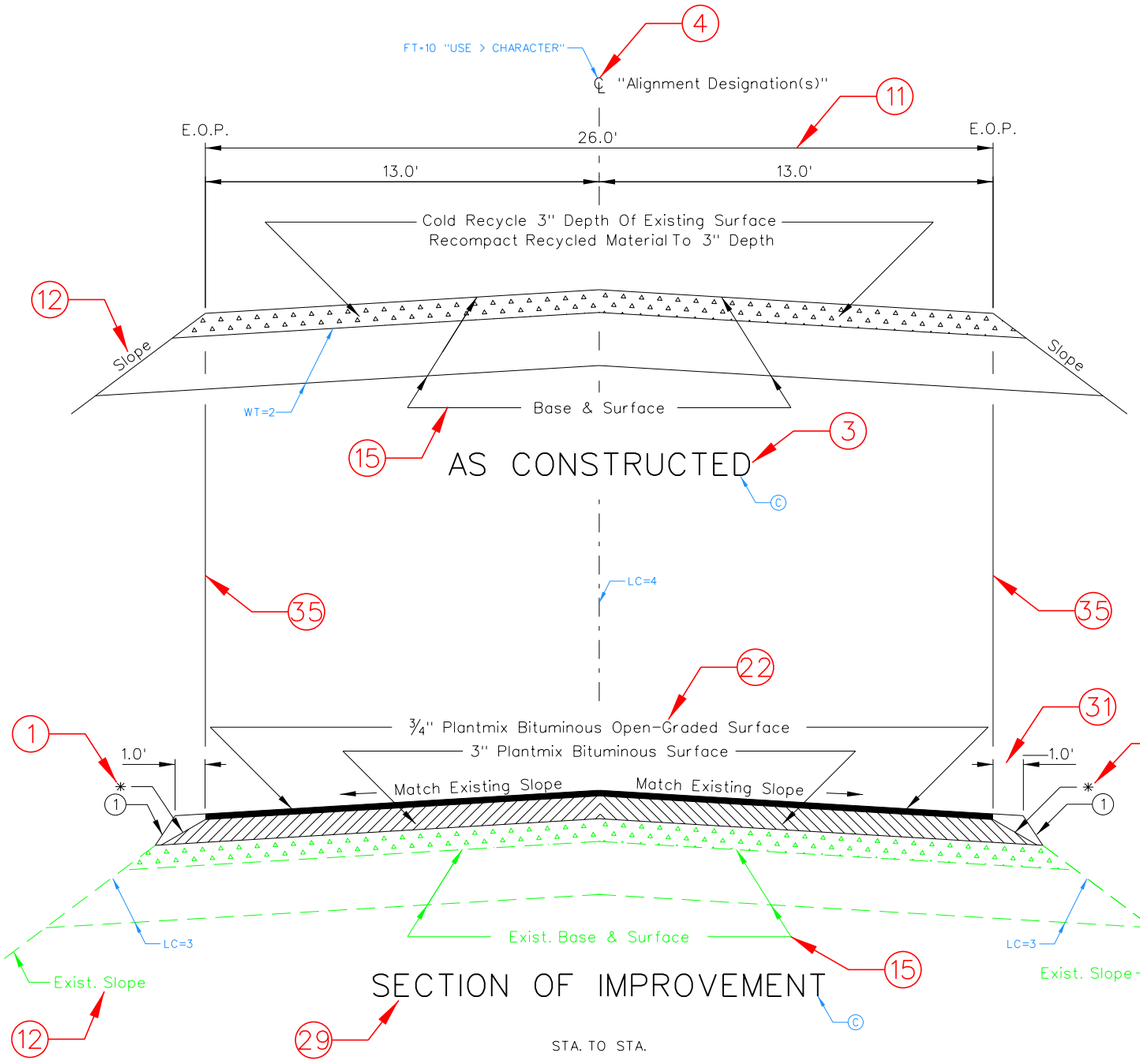
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

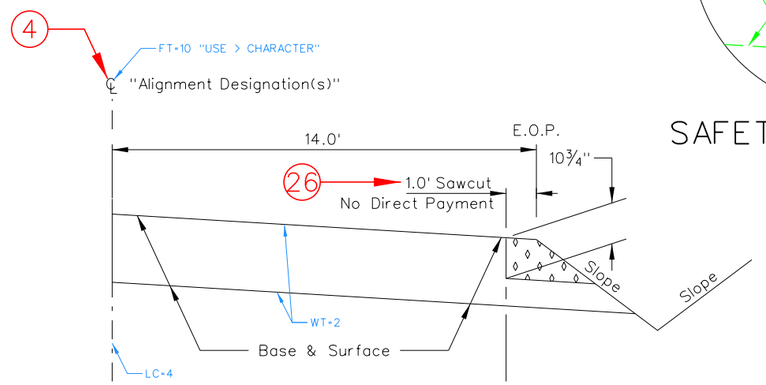
(C) – DENOTES CELL HAS BEEN USED

(T) – DENOTES TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

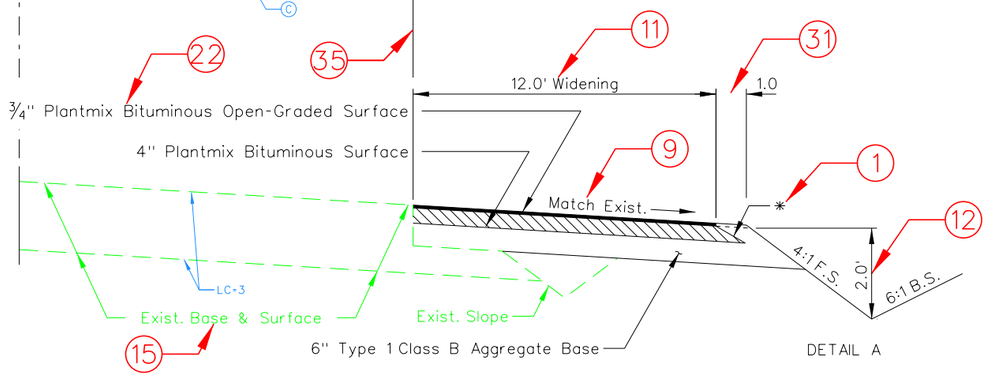


SAFETY EDGE DETAIL





HALF SECTION AS CONSTRUCTED RT.



HALF SECTION OF IMPROVEMENT RT.

16

STA. TO STA.

NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

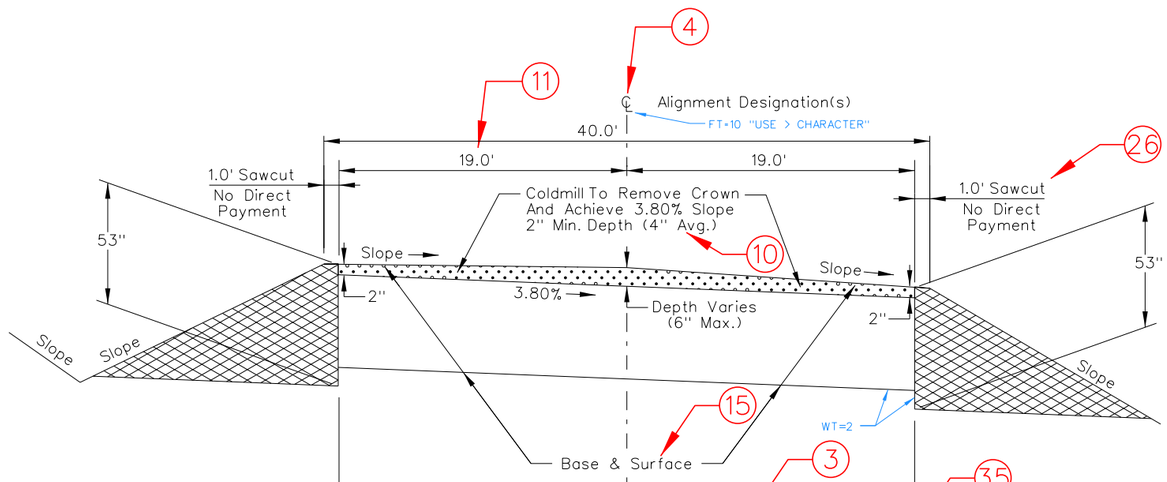
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(004)	CHURCHILL	26

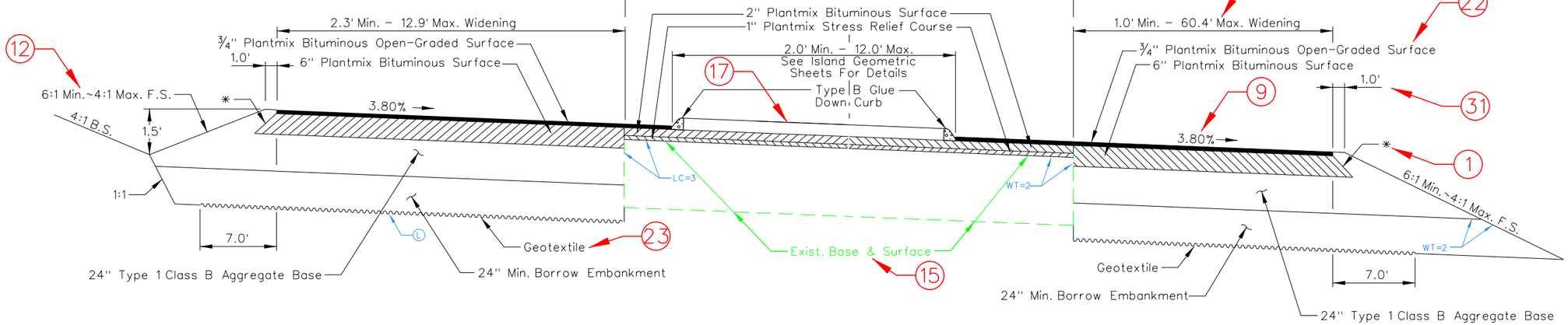
- LEGEND -

LIMITS OF REMOVAL (COLD MILLING)

LIMITS OF ROADWAY EXCAVATION

SAFETY EDGE





SECTION OF IMPROVEMENT

FT=3

"LE" 234+77.45 P.O.C. TO "LE" 257+22.34 P.O.C.
"LE" 257+22.34 P.O.C. TO "LE" 261+36.58 P.O.C. (STRUCTURE B-1234)(EXCEPTION AREA) SEE SHEET B1-B4
"LE" 261+36.58 P.O.C. TO "LE" 265+75.51 P.O.C.

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: F.Y.I., ALL DETAILS SHOWN ON THIS PAGE WERE DRAWN AT A 1:6 HORIZONTAL TO VERTICAL RATIO. USE AN APPROPRIATE H/V RATIO TO CLEARLY DEPICT THE DETAILS.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

(C) - DENOTES CELL HAS BEEN USED

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

NOTE: SHEETS SHOWING ONLY SECTIONS OF IMPROVEMENT SHALL NOT HAVE A TITLE BLOCK.

4.0 General Notes and Summaries.

General. The primary purpose of the summary sheets is to quantify roadway surfacing items such as aggregate base, dense-graded plantmix surfacing, and open-graded surfacing. Other major items of work that are quantified are summary of cold millings, and summary of earthwork (includes roadway excavation, borrow embankment, select borrow, channel excavation, drainage excavation, and shoulder material). Miscellaneous items such as guideposts, mileposts, theoretical application rates, core information, and general notes are also shown in the summaries. Portland Cement Concrete Paving (PCCP) is another material that would be shown in the summaries when placing PCCP.

General Notes and Summaries Guidelines. Electronic versions of the summary sheet templates are available on the Design SharePoint site.

Summary sheets are to be arranged so aggregate base, plantmix dense-graded surfacing, and open-graded surfacing quantities are organized in respective columns and rows with corresponding stationing and widths. These sheets may also include a column for cold milling if applicable. Summary sheets are to be arranged in order so the above mentioned items appear first with items described in the paragraph below following after. Summaries are broken out to show quantities left and right of centerline.

Roadway excavation, borrow embankment, select borrow, channel excavation, drainage excavation, and shoulder material items are usually summarized after aggregate base and plantmix products. Miscellaneous items such as guideposts, theoretical application rates, core information, and general notes generally follow after the above-mentioned items.

The summary sheet font type is “Arial” with the headers from 12-15 pt., sub-headers 11-13 pt., and station-to-station entries from 10-12pt. Adjustments to these guidelines are subject to project requirements.

Contracts with multiple projects require the summaries to be broken into their respective projects. Projects spanning over county lines do not need the summary sheets broken out into their respective county.

Quantities are to be shown to a pre-defined level of accuracy. Totals are to be shown to the level of accuracy as indicated in Table 4.

Stationing should be rounded to the hundredth of a foot. It is not necessary to accompany stations with P.O.C., P.O.T., P.C, P.T., etc.

Widths are to be noted with the respective station-to-station entries. Average widths are noted in areas of width transitions. Accuracy of the widths shall be to 0.1 foot and should match the typical sections.

General Notes and Summaries Particulars.

1a) Safety edge is required when no other adjacent vertical feature will retain the sloughing of the bituminous material. The safety edge also prevents a steep drop-off from forming if shouldering material erodes away. Safety edges are based off a 30° angle relative to the slope of the road. Safety edge is to be placed on the final lift of dense-graded surface. A safety edge is not necessary if the pavement edge is under or behind guardrail. Safety edges are not used on PCCP.

1b) Angle of repose is required when no other adjacent vertical feature will retain the sloughing of the bituminous material and when a safety edge is not used. Angle of repose is based on a 2H:1V slope. Angle of repose is not calculated for open-graded surface. PCCP is constructed vertically, therefore no angle of repose is shown or calculated.

2) Project number and county need to be shown in the upper right corner and placed in the appropriate designated boxes.

3) Sheet numbering for the summary sheets shall begin with number 3. Multiple summary sheets shall be numbered 3, 3A, 3B, 3C etc.

4) Aggregate base is to include 8 percent for moisture in the calculation of weight. A note is placed beneath the item to reflect that the quantity includes moisture content. Aggregate base is generally calculated in tons for District 1 and cubic yards for Districts 2 and 3.

5) Slope allowance is included in the base aggregate quantities and is to match the typicals or earthwork notes accordingly. Where aggregate base is constructed vertically, around curb and gutter or constant slope barrier rail for an example, no slope allowance is shown or calculated.

6) Summary of earthwork shows the total quantities of excavation, embankment, and borrow needed. It is best to think of excavation as the “supply” of the material and the embankment as the “need.” Roadway, structure, channel, and drainage excavation need to be broken out separately. Mainline alignments, ramps, detours, sign islands, etc. should have a quantity total at each specific location and are to be summarized at the end with a total. Excavated material that is suitable to be used as embankment can be subtracted from the borrow embankment quantity needed at each location. Select borrow, generally used around bridge abutments, shall be shown separately from borrow embankment when used. If any excavated material is to be disposed, the quantity for disposal should be noted. Contact the Geotechnical Engineer to determine if excavated material can be used for embankment.

7) Other removals are shown as needed with limits of removal and total quantity. Examples may include removal of concrete pavement and removal of composite surface.

8) Cold milling summary is required when cold milling is performed on the project. The summary is to show the amount of cold millings generated and the amount that will be placed on the project as shoulder material. Any remaining cold millings that are to be disposed of or stockpiled should also be indicated. If multiple cold milling depths are on the project, they should be broken out by depths.

9) Shouldering material summary is required when shouldering material is used on the project. The summary is to show the amount of shouldering material needed, amount of cold millings to be used as shouldering material (if applicable), and quantity of additional shouldering material needed. If multiple shouldering material depths are on the project, they should be broken out by tons per station per side.

10) Guideposts are summarized by type and color.

11) Object markers are summarized by type.

12) Theoretical application information is provided by the Materials Division***.*** This information is normally shown at the end of the Summary sheets above the General notes.

13) General notes are supplemental information that is not covered in the Standard Specifications or Special Provisions. They are shown at the end of the summary sheets.

14) Core data sheets are usually provided on cold milling, cold recycling, or roadbed mod projects. The Materials Division provides Roadway Design these sheets on a case-by-case scenario. Core data sheets are inserted after the summary sheets.

4.0 General Notes and Summaries (Continued).

TABLE 4		
Item	**U. S. Standard Units**	
	Unit	**Accuracy**
Base & Surface Aggregate	ton	1
Concrete	cuyd	0.01
Concrete, Elastomeric	cuft	0.01
Culverts, PVC Pipe	linft	1
Emulsified/Liquid Asphalts	ton	0.1
Erosion Control, Clearing & Grubbing	acre	0.1
Fence, C & G, Barrier Rail	linft	1
Guardrail	linft	1
Overhaul	yd-mi	1
Painted Striping	mile	0.001
Paving Asphalts, Mineral Filler	ton	1
Pulverize Existing Surface	mile	0.001
Reinforcing Steel, Structural Steel and Grates	lb	1
Roadway and Borrow Excavation, Riprap	cuyd	1
Signs and Marking Film	sqft	0.01
Cold milling, Sidewalks, Erosion Control	sqyd	0.1
Structure and Drainage Excavation, Backfill	cuyd	0.1
Trenching	sta	0.01
V-Ditches	sta	0.01

SUMMARY OF BASE AND SURFACE QUANTITIES

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	3

NOTE: QUANTITIES SHOWN IN THE SUMMARIES FOR BASE AND SURFACE MATERIALS ARE THEORETICAL AND USED FOR ESTIMATION PURPOSES ONLY.
ACTUAL SPREADS SHALL BE VARIED AS REQUIRED TO OBTAIN THE DEPTH OF THE VARIOUS COURSES SHOWN ON THE TYPICAL SECTIONS.

LOCATION	LENGTH	PLANTMIX STRESS RELIEF TYPE 3 (WET) INCLUDES ANGLE OF REPOSE (1)			PLANTMIX DENSE GRADE SURFACE TYPE 2C (WET) INCLUDES ANGLE OF REPOSE (1)			PLANTMIX OPEN GRADE SURFACE 3/8-INCH (WET) (2) (3)			COLD MILLING	RUBBLIZ-ATION PROCESS
	STATIONS	WIDTH FEET	DEPTH INCH	TONS PER STA / UNIT TONS	WIDTH FEET	DEPTH INCH	TONS PER STA / UNIT TONS	WIDTH FEET	DEPTH INCH	TONS PER STA / UNIT TONS	AREA SQYD	AREA SQYD
I-80 MAINLINE EASTBOUND												
RUBBLIZE												
"LE" 100+00.00 to "LE" 282+98.77	182.99	38.0 to 38.0	1.5	34.41 / 6297	38.0 to 38.0	5.00	116.01 / 21228	38.0 to 38.0	0.75	16.19 / 2962		77261.5
"LE" 282+98.77 to "LE" 285+85.48	2.87	38.0 to 58.0	1.5	43.42 / 124	38.0 to 58.0	5.00	146.22 / 419	38.0 to 58.0	0.75	20.44 / 59		1529.1
"LE" 285+85.48 to "LE" 288+62.50	2.77	38.0 to 38.0	1.5	34.41 / 95	38.0 to 38.0	5.00	116.01 / 321	38.0 to 38.0	0.75	16.19 / 45		1169.6
"LE" 288+62.50 to "LE" 289+12.50	0.50	39.5 to 39.5	1.5	35.76 / 18	39.5 to 39.5	5.00	120.54 / 60	39.5 to 39.5	0.75	16.82 / 8		211.1
"LE" 289+12.50 to "LE" 298+20.00	9.08	41.0 to 41.0	1.5	37.11 / 337	41.0 to 41.0	5.00	125.07 / 1135	41.0 to 41.0	0.75	17.46 / 158		3831.7
"LE" 298+20.00 to "LE" 298+80.00	0.60	41.0 to 41.0	1.5	37.11 / 22	41.0 to 41.0	5.00	125.07 / 75	41.0 to 41.0	0.75	17.46 / 10		
"LE" 298+80.00 to "LE" 306+00.00	7.20	41.0 to 41.0	1.5	37.11 / 267	41.0 to 41.0	5.00	125.07 / 901	41.0 to 41.0	0.75	17.46 / 126		3040.0
"LE" 306+00.00 to "LE" 308+25.00	2.25	39.5 to 39.5	1.5	35.76 / 80	39.5 to 39.5	5.00	120.54 / 271	39.5 to 39.5	0.75	16.82 / 38		950.0
"LE" 308+25.00 to "LE" 310+32.28	2.07	38.0 to 38.0	1.5	34.41 / 71	38.0 to 38.0	5.00	116.01 / 240	38.0 to 38.0	0.75	16.19 / 34		875.2
"LE" 310+32.28 to "LE" 318+00.00	7.68	58.0 to 38.0	1.5	43.42 / 333	58.0 to 38.0	5.00	146.22 / 1123	58.0 to 38.0	0.75	20.44 / 157		4094.5
"LE" 318+00.00 to "LE" 388+70.00	70.70	38.0 to 38.0	1.5	34.41 / 2433	38.0 to 38.0	5.00	116.01 / 8202	38.0 to 38.0	0.75	16.19 / 1144		29851.1
TRANSITIONS												
"XE" 671+46.68 to "XE" 674+21.68	2.75				38.0 to 38.0	2.00	46.28 / 127	38.0 to 38.0	0.75	16.19 / 45	1161	
"XE" 674+21.68 to "XE" 678+71.68	4.50	38.0 to 38.0	1.5	34.41 / 155	38.0 to 38.0	5.00	116.01 / 522	38.0 to 38.0	0.75	16.19 / 73	1900	
"LE" 388+70.00 to "LE" 393+20.00	4.50	38.0 to 38.0	1.5	34.41 / 155	38.0 to 38.0	5.00	116.01 / 522	38.0 to 38.0	0.75	16.19 / 73	1900	
"LE" 393+20.00 to "LE" 395+95.00	2.75				38.0 to 38.0	2.00	46.28 / 127	38.0 to 38.0	0.75	16.19 / 45	1161	
MOTE INTERCHANGE												
MILL & OVERLAY												
"R1" 10+11.01 to "R1" 14+62.00	4.51				21.3 to 21.3	2.00	26.09 / 118	21.3 to 21.3	0.75	9.07 / 41	1067	
(REMOVE CATTLE GUARD; SEE SHEET 3A)												
"R1" 14+72.00 to "R1" 15+43.84	0.72				21.3 to 21.3	2.00	26.09 / 19	21.3 to 21.3	0.75	9.07 / 7	170	
"R2" 15+67.84 to "R2" 16+33.00	0.65				20.9 to 20.9	2.00	25.61 / 17	20.9 to 20.9	0.75	8.90 / 6	151	
(REMOVE CATTLE GUARD; SEE SHEET 3A)												
"R2" 16+43.00 to "R2" 20+18.78	3.76				20.9 to 20.9	2.00	25.61 / 96	20.9 to 20.9	0.75	8.90 / 33	873	
"R3" 18+78.00 to "R3" 19+42.44	0.64				22.1 to 22.1	2.00	27.06 / 17	22.1 to 22.1	0.75	9.41 / 6	158	
"R4" 19+66.52 to "R4" 20+32.00	0.65				22.0 to 22.0	2.00	26.94 / 18	22.0 to 22.0	0.75	9.37 / 6	160	
"C" 3+00.00 to "C" 4+75.00	1.75				24.0 to 24.0	2.50	36.80 / 64	24.0 to 24.0	0.75	10.22 / 18	467	
"C" 4+75.00 to "C" 5+19.00	0.44							20.0 to 20.0	1.00	11.36 / 5	98	
"C" 5+19.00 to "C" 7+22.00	2.03				24.0 to 24.0	2.50	36.80 / 75	24.0 to 24.0	0.75	10.22 / 21	541	
"C" 7+22.00 to "C" 7+66.00	0.44							20.0 to 20.0	1.00	11.36 / 5	98	
"C" 7+66.00 to "C" 9+26.00	1.60				24.0 to 24.0	2.50	36.80 / 59	24.0 to 24.0	0.75	10.22 / 16	427	
(CATTLE GUARD)												
"C" 9+34.00 to "C" 11+04.75	1.71				24.0 to 24.0	2.50	36.80 / 63	24.0 to 24.0	0.75	10.22 / 17	455	
TRANSITIONS												
"R1" 2+86.01 to "R1" 7+36.01	4.50	21.3 to 21.3	1.5	19.37 / 87	21.3 to 21.3	5.00	65.55 / 295	21.3 to 21.3	0.75	9.07 / 41	1065	
"R1" 7+36.01 to "R1" 10+11.01	2.75				21.3 to 21.3	2.00	26.09 / 72	21.3 to 21.3	0.75	9.07 / 25	651	
"R2" 20+18.78 to "R2" 22+93.78	2.75				20.9 to 20.9	2.00	25.61 / 70	20.9 to 20.9	0.75	8.90 / 24	639	
"R2" 22+93.78 to "R2" 27+43.78	4.50	20.9 to 20.9	1.5	19.01 / 86	20.9 to 20.9	5.00	64.34 / 290	20.9 to 20.9	0.75	8.90 / 40	1045	
				Total / 10562								
SPANDRELS												
"C" 3+60.00 LT.						2.00	1		0.75	1	12	
"C" 3+60.00 RT.						2.00	1		0.75	1	12	
"C" 3+82.00 LT.						2.00	2		0.75	1	18	
"C" 3+82.00 RT.						2.00	2		0.75	1	18	
"C" 8+60.00 LT.						2.00	2		0.75	1	18	

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	3A

LOCATION	LENGTH	BASE AGGREGATE (TYPE 1 CLASS B) INCLUDES SLOPE ALLOWANACE AND 1' WIDENING (includes 8% for moisture)				PLANTMIX DENSE GRADE SURFACE TYPE 2C (WET) INCLUDES ANGLE OF REPOSE				PLANTMIX OPEN GRADE SURFACE 3/8-INCH (WET)				COLD MILLING	RUBBLIZ-ATION PROCESS
	STATIONS	WIDTH FEET	DEPTH INCH	CUYD PER STA	UNIT CUYD	WIDTH FEET	DEPTH INCH	TONS PER STA	UNIT TONS	WIDTH FEET	DEPTH INCH	TONS PER STA	UNIT TONS	AREA SQYD	AREA SQYD
MOTE INTERCHANGE CONTINUED															
SPANDRELS															
"C" 8+60.00 RT.							2.00		2		0.75		1	18	
"C" 8+81.00 LT.							2.00		1		0.75		1	12	
"C" 8+81.00 RT.							2.00		1		0.75		1	12	
CATTLE GUARD PATCHING															
"R1" 14+62.00 to "R1" 14+72.00	0.10	21.30 to 21.30	30.25	198.87	20	21.3 to 21.3	5.00	65.55	7	21.3 to 21.3	0.75	9.07	1		
"R2" 16+33.00 to "R2" 16+43.00	0.10	20.90 to 20.90	30.25	195.13	20	20.9 to 20.9	5.00	64.34	6	20.9 to 20.9	0.75	8.90	1		
MEDIAN CROSSOVERS															
"LE" 279+50.00 RT.			4.25		89		3.00		125						
"LE" 322+25.00 RT.			4.25		89		3.00		125						
BARRIER RAIL (INCLUDES BASE AS SHOULDER MATERIAL AND FILL FOR ERODED AREAS)															
LEFT SIDE															
"LE" 288+62.50 to "LE" 298+39.00	9.77		VARIES		248										
"LE" 298+61.00 to "LE" 306+00.00	7.39		VARIES		171										
RIGHT SIDE															
"LE" 289+12.50 to "LE" 298+39.00	9.27		VARIES		263										
"LE" 298+61.00 to "LE" 308+25.00	9.64		VARIES		280										
STRUCTURE LIST TOTAL					250										
				Total	**1430**			**Total**	**36822**			**Total**	**5296**	**14308**	**122813.8**

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	3B

SUMMARY OF EARTHWORK

6

LOCATION					ROADWAY EXCAVATION	STRUCTURE EXCAVATION	EMBANKMENT	BORROW EMBANKMENT
CL	Station		CL	Station	CUYD	CUYD	CUYD	CUYD
I-80 MAINLINE EASTBOUND								
LEFT SIDE								
"LE"	100+00.00	to	"LE"	293+50.00			27,142	27,142
"LE"	304+00.00	to	"LE"	388+70.00			13,398	13,398
RIGHT SIDE								
"LE"	100+00.00	to	"LE"	284+00.00			14,669	14,669
"LE"	315+50.00	to	"LE"	388+70.00			5,839	5,839
MEDIAN CROSSOVERS								
"LE"	279+50.00				76			
"LE"	322+25.00				76			
BARRIER RAIL								
LEFT SIDE								
"LE"	288+62.50	to	"LE"	306+00.00	340			
RIGHT SIDE								
"LE"	289+12.50	to	"LE"	308+25.00	374			
HYDRAULICS (Structure List Quantities)						160.7		
STRUCTURE I-877E WING WALL RIPRAP					48			
CATTLE GUARD PATCHING					9.4			
			TOTAL:		**924**	**160.7**	**61049**	**61049**

NOTE: ROADWAY EXCAVATION HAS BEEN DEEMED UNSUITABLE FOR USE AS EMBANKMENT

7

REMOVAL OF CONCRETE PAVEMENT

I-80 MAINLINE EASTBOUND

"LE"	290+14.00	to	"LE"	306+86.00	7060 SQYD
				TOTAL:	**7,060 SQYD**

8

SUMMARY OF COLD MILLINGS

MILLINGS GENERATED		1,504 TONS
MILLINGS USED FOR SHOULDERING MATERIAL	**TOTAL:**	**1,504 TONS**
MILLINGS TO BE DISPOSED	**TOTAL:**	**0 TONS**
5% MISCELLANEOUS COLD MILLING	**TOTAL:**	**715 SQYD**

SUMMARY OF SHOULDERING MATERIAL

9

SHOULDERING MATERIAL (36.25 TONS PER STATION PER SIDE)

I-80 MAINLINE LEFT AND RIGHT SIDE

"XE"	674+21.68	to	"XE"	678+71.68	326 TONS
"LE"	388+70.00	to	"LE"	393+20.00	326 TONS
"R1"	02+86.01	to	"R1"	07+36.01	326 TONS
"R2"	22+93.78	to	"R2"	27+43.78	326 TONS

MEDIAN CROSSOVERS

"LE"	279+50.00				152 TONS
"LE"	322+25.00				152 TONS
				TOTAL:	**1,608 TONS**

SHOULDERING MATERIAL (16.25 TONS PER STATION PER SIDE)

LEFT AND RIGHT SIDE

"C"	03+00.00	to	"C"	04+75.00	57 TONS
"C"	05+19.00	to	"C"	07+22.00	56 TONS
"C"	07+66.00	to	"C"	09+26.00	57 TONS
"C"	09+34.00	to	"C"	11+04.75	58 TONS
				TOTAL:	**226 TONS**

SHOULDERING MATERIAL (13.75 TONS PER STATION PER SIDE)

LEFT AND RIGHT SIDE

"XE"	671+46.68	to	"XE"	674+21.68	76 TONS
"LE"	393+20.00	to	"LE"	395+95.00	76 TONS
"R1"	07+36.01	to	"R1"	10+11.01	76 TONS
"R1"	10+11.01	to	"R1"	14+62.00	124 TONS
"R1"	14+72.00	to	"R1"	15+43.84	20 TONS
"R2"	20+18.78	to	"R2"	22+93.78	76 TONS
"R2"	15+67.84	to	"R2"	16+33.00	18 TONS
"R2"	16+43.00	to	"R2"	20+18.78	103 TONS
"R3"	18+78.00	to	"R3"	19+42.44	18 TONS
"R4"	19+66.52	to	"R4"	20+32.00	18 TONS
				TOTAL:	**603 TONS**

SHOULDERING MATERIAL (10 TONS PER STATION PER SIDE)

I-80 MAINLINE LEFT SIDE

"LE"	100+00.00	to	"LE"	288+62.50	1,886 TONS
"LE"	306+00.00	to	"LE"	388+70.00	827 TONS

I-80 MAINLINE RIGHT SIDE

"LE"	100+00.00	to	"LE"	282+98.77	1,830 TONS
"LE"	318+00.00	to	"LE"	388+70.00	707 TONS
				TOTAL:	**5,250 TONS**

MILLINGS USED FOR SHOULDERING MATERIAL	**MINUS:**	**1,504 TONS**
SHOULDERING MATERIAL NEEDED	**TOTAL NEEDED:**	**6,184 TONS**

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	3C

10

GUIDEPOSTS	
TYPE 1 REFLECTORS (WHITE) (RIGID POST)	126
TYPE 1 REFLECTORS (YELLOW) (RIGID POST)	126
TOTAL:	**252**

11

OBJECT MARKERS	
TYPE 2 MODIFIED OBJECT MARKERS	6
TOTAL:	**6**

12

THEORETICAL APPLICATION OF SURFACING MATERIALS		
ASPHALT CEMENT, GRADE PG64-28NV OR GRADE PG 64-28NVTR (TYPE 2C) (DENSE GRADE)	**5.25**	**%**
ASPHALT CEMENT, GRADE PG64-28NV OR GRADE PG 64-28NVTR (TYPE 3) (STRESS RELIEF COURSE)	**5.75**	**%**
ASPHALT CEMENT, GRADE PG64-28NV OR GRADE PG 64-28NVTR (3/8" SIZE) (OPEN-GRADE)	**6.75**	**%**
MINERAL FILLER	**1.50**	**%**
SPECIFIC GRAVITY	**2.62**	
EMULSIFIED ASPHALT, TYPE SS-1H (DILUTED)		
Tack Cold Milled Surface	**0.10**	**gal/yd²**
Tack Open Grade	**0.07**	**gal/yd²**
Tack Plantmix Bituminous Surface Lifts	**0.06**	**gal/yd²**
Seal Coats	**0.12**	**gal/yd²**
PRIME COAT		
Cutback Asphalt, Type MC-70 NV	**0.28**	**gal/yd²**
Prime Rubblized Surface	**0.28**	**gal/yd²**
Alternative Prime coat from Q.P.L.	**See Q.P.L.**	
AGG.BASE UNIT WEIGHT	**137.10**	**lbs/ft³**
COLD MILLING UNIT WEIGHT (LOOSE)	**1.690**	**ton/yd³**
COLD MILLING UNIT WEIGHT (COMPACTED)	**1.760**	**ton/yd³**
DENSE-GRADED PLANTMIX WET (TYPE 2C)	**1.958**	**ton/yd³**
DENSE-GRADED PLANTMIX WET (TYPE 3)	**1.945**	**ton/yd³**
OPEN-GRADED PLANTMIX WET	**1.840**	**ton/yd³**
Weight Volume Relationship for SS-1h	**241.00**	**gal/ton**

ASPHALT CEMENT AND MINERAL FILLER QUANTITIES (FOR INFORMATIONAL PURPOSES ONLY)	PG 64-28NV OR PG 64-28NVTR TONS	MINERAL FILLER TONS
DENSE GRADE - TYPE2:	**1,935**	**553**
OPEN GRADE:	**357**	**79**
LEVELING COURSE:	**737**	**192**
USE TOTAL:	**3,030**	**830**

13

GENERAL NOTES

1. **Refer to Nevada Department of Transportation Standard Specifications for Road and Bridge Construction, 2014 Edition, for specifications except as modified by these plans and special provisions.**
2. **Traffic control devices shall conform to the requirements of the M.U.T.C.D. 2009.**
3. **Depth of base and surface is minimum compacted thickness.**
4. **Remove all existing mileposts, guide posts, and object markers at no direct payment**

Lane Abbreviations: Cntr Trn = Center Turn Lane Location Abbreviations: Gutter Pan =GP, Right/Left /Between Wheel Path=RWP/LWP/BWP Centerline=CL, EastBound=EB, WestBound=WB, NorthBound=NB, SouthBound=SB
Core Abbreviations: Gutter Pan =GP, Stripped=Strp, Delaminated=Delm, Broke=Brk, Bottom=BTM, Roadmix=RM, Roadbed Modification=RBM, Plantmix Bituminous Surface=PBS, Cement Treated Base=CTB, Light=LT, Medium=MED, Heavy=HVY

PRELIMINARY
Subject to Revision
01/03/2020

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-0612(001)	CLARK	3AQ

SP-000M(181)

14 → **MATERIALS DIVISION CORE DATA SHEET**
Limits listed are in County Cummulative Miles

Notes: SR612, NELLIS BLVD, FROM TROPICANA AVENUE TO SR604, LAS VEGAS BLVD
SR 612 CL 37.88 to 47.307 Date: 7/12/2018

Core No.	County Cum. Mile	Distance to CL (ft)	Side	Direction	Lane No	Location Remarks	Total Depth (in)	PBS Depth (in)	Core Size (in)	Core Condition
1	37.994	9.00	RT	NB	Lane 2	RWP	7.63	7.63	4	BRK FM TOP TO 0.75" / FABRIC @ 3.00" / MED STRP FM 3.00" TO 5.13" / CRACK IN CORE FM 5.13" TO
2	41.074	21.00	RT	NB	Lane 3	RWP	9.38	9.38	4	
3	42.049	21.00	RT	NB	Lane 3	RWP	7.13	0.00	4	PCCP PAVEMENT
4	43.103	21.00	RT	NB	Lane 3	RWP	8.88	0.00	4	PCCP PAVEMENT
5	44.139	21.00	RT	NB	Lane 3	RWP	8.00	8.00	4	
6	46.990	21.00	RT	NB	Lane 3	RWP	9.13	9.13	4	
7	45.660	21.00	LT	SB	Lane 3	RWP	8.88	8.88	4	
8	43.135	21.00	LT	SB	Lane 3	RWP	7.88	0.00	4	PCCP PAVEMENT
9	42.165	21.00	LT	SB	Lane 3	RWP	13.50	8.25	4	DELM @ 8.25" / BASE FM 8.25" TO BTM
10	42.078	21.00	LT	SB	Lane 3	RWP	7.25	0.00	4	PCCP PAVEMENT / CRACK FM TOP TO 1.75"
11	39.525	21.00	LT	SB	Lane 3	RWP	13.50	8.75	4	DELM @ 8.75" / BASE FM 8.75" TO BTM

Notes: SR589, SAHARA AVENUE, AT THE JUNCTION WITH NELLIS BLVD
SR 589 CL 31.429 to 31.494 Date: 8/17/2010

1	31.429	3.00	LT	EB	Lt Turn	RWP	6.75	6.75	4	
2	31.434	7.00	RT	EB	Lt Turn	RWP	7.25	7.25	4	
3	31.438	17.00	RT	EB	Lane 1	RWP	6.50	6.50	4	
4	31.443	27.00	RT	EB	Lane 2	RWP	6.75	6.75	4	
5	31.448	37.00	RT	EB	Lane 3	RWP	7.63	7.63	4	RUBBER MATERIAL FM 1.00" TO 2.25" / COPPER WIRE FM 2.00" TO 2.25"
6	31.460	17.00	RT	EB	Lane 1	RWP / INTERSECTION	5.25	0.00	4	PCCP
7	31.463	27.00	RT	EB	Lane 2	RWP / INTERSECTION	8.00	0.00	4	PCCP
8	31.466	37.00	RT	EB	Lane 3	RWP / INTERSECTION	7.38	0.00	4	PCCP / CRACKED FM TOP TO BTM
9	31.475	17.00	RT	EB	Lane 1	RWP	7.38	7.38	4	
10	31.480	27.00	RT	EB	Lane 2	RWP	6.50	6.50	4	
11	31.485	37.00	RT	EB	Lane 3	RWP	8.25	8.25	4	
12	31.494	3.00	RT	WB	Lt Turn	RWP	7.00	7.00	4	
13	31.490	7.00	LT	WB	Lt Turn	RWP	7.38	7.38	4	
14	31.485	17.00	LT	WB	Lane 1	RWP	6.75	6.75	4	
15	31.480	27.00	LT	WB	Lane 2	RWP	7.38	7.38	4	
16	31.475	37.00	LT	WB	Lane 3	RWP	7.25	7.25	4	
17	31.468	17.00	LT	WB	Lane 1	RWP / INTERSECTION	7.50	0.00	4	PCCP
18	31.463	27.00	LT	WB	Lane 2	RWP / INTERSECTION	8.88	0.00	4	PCCP
19	31.458	37.00	LT	WB	Lane 3	RWP / INTERSECTION	8.88	0.00	4	PCCP
20	31.448	17.00	LT	WB	Lane 1	RWP	7.13	7.13	4	
21	31.443	27.00	LT	WB	Lane 2	RWP	7.25	7.25	4	
22	31.434	37.00	LT	WB	Lane 3	RWP	7.63	7.63	4	

5.0 Roadway Plans.

General. The purpose of the plan and profile sheets is to convey information necessary to locate and construct the contract's road design elements.

Roadway Plan Guidelines. The use of full plan and profile sheets is generally used for new construction, interchanges, or widening projects. Full plan and profile sheets are where the entire sheet is dedicated to a plan view or profile view. Arrange these sheets so all plan sheets are shown first followed by the profile sheets.

In some cases it may be acceptable to use split plan sheets when less detail is required. These are typically used on simple overlay projects with straight alignments or projects in rural areas that have minimal construction notes. A split plan view is where the sheet is divided with a solid black line lengthwise and contains a plan view on the top and on the bottom.

A combined plan and profile sheet can be used when determined appropriate. These sheets are divided with a plan view on the top and the profile view on the bottom. Where mainline profiles appear on combined plan and profile sheets, full profile sheets shall be used to show profiles of supplemental alignments, such as frontage roads, crossroads, ramps, drainage features, and other roads which cannot be added conveniently to the profile portion of the combined plan and profile sheet.

Each sheet should be arranged such that major construction features appear on one sheet; for example the major portion of an interchange should appear on one sheet. Diagonal placement is satisfactory to obtain better coverage, although this may necessitate breaks in the profile. Match lines should be used to retain accuracy and clarity.

Plan sheets are to be oriented so that stationing progresses from left to right. When stationing runs in the opposite direction from the mileposts, the plans should read in the direction of the stationing.

Sheet layout maps may be used to show sheet layout within the contract. This is used when the plans sheets do not progress in order or when there are several overlapping sheets.

Existing features such as edge of pavement, culverts, right of way, section lines, curve data, and utilities shall be shown in green. New improvements such as roadway widening, cut and fill lines, plan notes, culvert extensions, limits of miscellaneous paving, etc. shall be shown in black. Overlays do not constitute black lines for edge of oil.

Selection of a scale should be adequate to show all the necessary details as governed by the topography and the complexity of the work. Generally, the plan views should be printed to a scale of one-inch equals 100 feet (1" = 100'), although certain cases may require a larger or smaller scale. Profile views should be drawn to the same horizontal scale as the plan view with the vertical scale exaggerated ten times, but may be adjusted to adequately show other features, such as drainage, bridge footings, etc.

Plan sheets shall appear in the following order: mainlines, ramps, cross roads, frontage roads, other roads, bicycle/pedestrian paths, and then detours.

In the absence of location control sheets, the "Bearing Source" must be shown on the first plan sheet in the upper left-hand corner.

Indicate whether the bearing source is from an aerial survey, solar or polaris observations, geodetic azimuth, from other surveys or assumed bearings. If the bearing source changes from one sheet to the other, the new bearing source must be shown on the affected plan sheet.

Show and label boundaries including parks, forests, recreation areas, historic districts, military zones, tribal lands, incorporated townships, counties and states, cities and towns.

The use of control lines for any bikeways, walkways or drainage shall be shown with the appropriate station ties. These are normally office-generated alignments that are tied to a surveyed mainline alignment.

Only features that affect bidding, construction, maintenance, and are essential for field orientation of the plan should be shown. Topography should be confined to that portion within the right-of-way and a small portion outside of those limits as needed for clarity, such as side streets, approaches, parking lots, etc.

Common features that are shown include: buildings, roads, streets, railroads, rivers, streams, utilities, signs, trees, curbs, gutters, sidewalks, etc. In the event that relocation or disposition of these items is included in the project, the plan should show the present and proposed location. Include both horizontal and vertical position and additional details as may be needed to indicate the scope of the work to be performed.

Avoid the practice of using cross-hatching, patterning, or shading to highlight large areas to represent roadway surfaces to be paved, milled or otherwise; the typical cross sections adequately address these improvements. The highlighting of large areas only hides, or detracts, from the rest of the information being displayed on the sheet. Area highlighting should be reserved for small or isolated areas of work that may get lost if not displayed in this manner.

Utilities to be adjusted during construction by either removal or relocation should be annotated and located on the plans.

Plan sheets can become cluttered from the amount of information presented. In such cases, it is beneficial to present some information elsewhere, such as note sheets, removal sheets, geometric sheets, and special details.

In special situations, as built plans may be incorporated into the contract plans as reference sheets. An example where this would apply is when removing certain items such as concrete structures, complex drainage features, or large foundations that are not depicted in the plans with adequate details. This information assists prospective bidders in determining the costs of removals and helps the Resident Engineer verify removal quantities. Each sheet of the original project plans must be identified as "As Built."

Items that are generally labeled and dimensioned on the plans are items that do not have a construction note or are not adequately covered with a legend. Examples of these items are flat bottom ditches, flow lines, existing curb and gutter, edge of pavement, right of way lines, back of sidewalk, etc. Items that do not need to be labeled and dimensioned are items that are adequately described in construction notes such as headwalls, fence, mailboxes, riprap, pull boxes, loops, guardrail, etc.

Roadway Plan Particulars. Specific information for components on the plan sheet as follows:

1) Alignments shall be shown on each plan sheet with an arrow and alignment identity pointing to each alignment ("P", "VE", etc). On divided highways where independent centerlines are used, the centerline separation distances are to be dimensioned. Frontage roads, ramps, detours, and other roads should have independent alignments with curve data. Alignments from construction limits to project limits are to be shown as a dashed black line. Alignments outside of construction limits are to be shown as green. Check alignments that are used in the plan sheets to ensure they match the location control.

2) Alignment tie points shall be shown on the plans as follows: The designation and station for secondary alignments, such as ramps and crossroads, are listed first. The mainline designation, station and offset information are listed next. The distance (left or right) is referenced from mainline looking ahead on line.

3) Angle points are to be identified and labeled with their respective stationing and a leader extending to the pertinent alignment. The angle of deflection is to be noted.

5.0 Roadway Plans (Continued).

4) Approaches receiving pavement should have the appropriate radius with an arrow pointing to the spandrel area unless this information is covered in the plans as a detail or if they are covered in the standard plans.

5) Bearings are to be shown on all tangent sections along the alignment. Alignment information along tangents is to include bearing and tangent length, and is shown on each plan sheet.

6) Bearing equations are to be shown where there is a change in alignment heading. Equations are to include the pertinent line designations and information such as P.T., P.O.T., P.C., P.O.C.

7) Bridges (including boxes 10'and greater in span) shall be identified with a flag pointing to the structure and is to include their respective structure numbers and mileposts. The Structures Division assigns the structure number and the mileposts are designated in the milepost index.

8) Construction notes are to be placed on the plans in the order of stationing. They should be arranged in columns when possible rather than scattered randomly over the plans. The plan notes shall match the notes on the structure list and should reference to other sheet numbers, such as special detail sheets, removal sheets, etc. Orient construction notes left or right of the alignment according to the call out of the note. On especially difficult and crowded situations, a note sheet can follow the plan sheet with the corresponding numbered notes. If it is determined to use note sheets, utilize a number schematic to correlate the note to the plan sheet. Number each note starting with number 1 on each page. Show a numbered leader with the corresponding work on each page. These sheets would be labeled 4A, 5A, etc. For construction note terminology see Section 21 Structure Lists.

9) Control of access shall be shown on the plans in order to provide details to access openings and locked gates. New control of access shall be shown with the appropriate station/offset for openings and where it begins and ends. It is not necessary to show control of access on other sheets such as striping, traffic control, etc.

10) Culverts that exist in the field are to be labeled with their respective diameter and length. New pipes or pipe extensions do not need to be labeled when a construction note adequately describes the location, size, and skew of the new pipe. Drainage structures with a span 10' and greater, shall be identified with the appropriate structure number. The Bridge Division assigns the structure numbers to culverts. Span of the culvert is measured along the roadway centerline.

11) Curb and gutter should be labeled with the appropriate type. When calling out new curb and gutter in the construction notes, the offset dimension is measured to the flow line (see Standard Plans). However, when providing dimensions for curb and gutter in the typical sections, dimension from the control line to the lip of gutter to ensure the widths match the typicals and summary sheets.

12) Curb ramps are to be labeled on the plans with the respective type noted. Station/offset dimensions are located at the flow line of the curb, centered within the ramp.

13) Curve data shall contain delta, radius, length, and tangent information. Curve data shall include the alignment designation directly above the list of data. Curve data is to be placed on the inside of the curve. Partial alignment data such as "Curve used" needs to be calculated and shown in the plans if this information is not available on the location control sheets.

14) Cut and fill lines are to be shown to represent the location where they intersect original ground.

15) Ditches and channels are to be shown as a dashed line and labeled with their respective size unless they are adequately depicted on the typical sections. Typically large drainage ditches, such as flat bottom ditches that does not follow the roadway, may require a separate alignment or station/offset information on the plans.

16) Ditch notes may be shown in the plan view if there are no profile sheets in the set of plans. This is usually the case where widening of an existing roadway is done without a change in profile grade. The ditch notes would appear in the lower portion of the plans and have stationing where the ditch section changes.

17) Edge of Pavement should be annotated with a station/offset where the pavement width varies from the alignment. This would be applied predominately on new construction or widening projects. On basic overlays existing edge of pavement would not necessarily need to be annotated with a station/offset unless it clarifies removals or paving limits.

18) Environmental areas such as cultural avoidance areas or regulated wetland areas shall be outlined if within the limits of construction. Areas that can be adequately described in the Special Provisions do not need to be shown.

19) Exception areas are where no work is to be performed. This is usually on bridge decks that do not need any surfacing or repairs. These areas are to have a leader pointing to the alignment along with the stationing depicting these areas of "Begin Exception" or "End Exception."

20) Islands are to be shown on the plans. However, the geometric sheets depict detailed information such as curve data, bearings, offsets, etc. When modifying islands, show the appropriate station/offset to the connection points where the new meets the existing.

21) Insets can be used to show greater level of detail that cannot otherwise be seen with the scale used on the plan sheet.

22) Legends shall be placed in the upper left corner of the plan sheet when practical. Some examples of these would be plantmixing miscellaneous areas, limits of paving, and removal of bituminous surface. When a structure note identifies what is to be constructed such as shoulder dike, barrier rail, guardrail, riprap, etc, these do not necessarily need legends.

23) Match lines are to be used when a section of the view is included on a separate sheet. Include sheet number when referencing a different sheet (e.g. Match line "A" See sheet B-5).

24) Milepost panels (county posts not cumulative miles) shall be shown on the plan sheets in green. These shall be relative to the line of stationing and be annotated with the panel number. The purpose of this indication is to facilitate the correlation of mile-posted data, such as district permits, with the project plans and also to provide a means of relating the plan elements to the milepost panels during field reviews.

25) North arrow must always be shown on each plan sheet and is generally located near the top of the sheet. The arrow should include a notation indicating the township and range and section, unless this information is readily identified elsewhere on the sheet.

26) Permission to construct is additional area necessary for constructing approaches, placing signs, striping, or traffic control outside of right of way. The limits of these areas are to be dimensioned from alignment with station offsets. A dashed line outlining the perimeter of the area is shown in black and labeled "Permission to construct." Consult the Right of Way Division for the use of permission to construct versus the use of temporary easements.

27) Project Number and county need to be shown in the upper right corner and placed in the appropriate designated boxes.

5.0 Roadway Plans (Continued).

28) Project construction limits shall be shown on the plans with the appropriate stationing. Begin/end construction is for incidental work that is being performed beyond the project limits, such as additional striping, permanent signing, and pavement transitions. If the construction limits are the same as project limits, there is no need to define Begin/End construction on the plans. Traffic control devices do not need "Begin Construction" and "End Construction."

29) Right-of-way lines shall be shown on the plans with respective distances from the alignment. Dimension right of way when no right of way sheets are provided. The dimensions are indicated on the left and right extremities of each plan sheet. Right-of-way shall be indicated in a manner that clearly defines its relationship to the control of access and fencing. Where right of way acquisitions are done in advance of the contract, the Right of Way Division will provide right of way sheets with detailed information as to permanent and temporary easements, with all applicable information such as bearings, distances, and offsets. The new right of way lines shall be shown on the plan sheets in green. Roadways with prescriptive rights will generally not show any right of way lines, but shall include the following note: AREAS OF R/W NOT DELINEATED ARE PRESCRIPTIVE RIGHTS ONLY AND ARE LIMITED TO NDOT MAINTAINED AREA OF THE HIGHWAY AND APPURTENANCES SUCH AS SLOPES AND DITCHES. CONTACT LOCAL NDOT MAINTENANCE FORCES FOR LIMITS.

30) Sections are to depict a cross section view or a greater level of detail that cannot be obtained on the plans. Normally the section view is displayed on the same sheet with a border around it to display it as a detail.

31) Section lines**,** township, range, sections, ¼ sections, section corners, and existing right-of-way must be shown and identified. This information will be shown with the north arrow if it does not appear elsewhere on the plan sheet. Sixteenth (1/16) section lines must be shown when they represent a boundary line of a city, town, national forest, game reserve, military reservation, property line, or when they represent a change in right of way. Coordinate the section net with the Right of Way Division when there are right of way acquisitions on the project.

32) Sheet numbering starts with the number 4 and shall be continued with whole numbers. Alpha numeric numbers should not be used on plan or profile views, such as 5A, 6A, etc., unless note sheets are used (See construction notes).

33) Sound walls are to be shown with the appropriate station and offset at each end. The offset distance is measured to the center of the wall.

34) Stationing, including equations, shall be shown as reading from left to right. Station ticks will be at 100' intervals with every 500' station having the corresponding station label. If linear equations are present, the designer should use "gap" equations and not "overlap" equations. Overlap equations cause confusion because of the duplication of stationing caused by the overlap. To convert an overlap equation to a gap equation a prefix such as "10" can be added to the ahead station (e.g. 5+00 would become 105+00), or by increasing the first digit of the ahead station by one (e.g. 110+00 would become 210+00). Alignment changes must be made in cooperation with the location engineer and coordinated with the other engineering divisions. Main alignments used for construction shall be shown in black with any alignments used as general references shown in green.

35) Utilities shall always be shown. Where the location of the utility must be accurate, conflicts are anticipated, or relocations may be necessary, a task order is prepared to have the utilities designated and potholed as required. As an option for clarity, existing utilities may be shown in multiple colors and on separate utility sheets if necessary.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	4

- LEGEND -

* - LIMITS OF PAVING

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

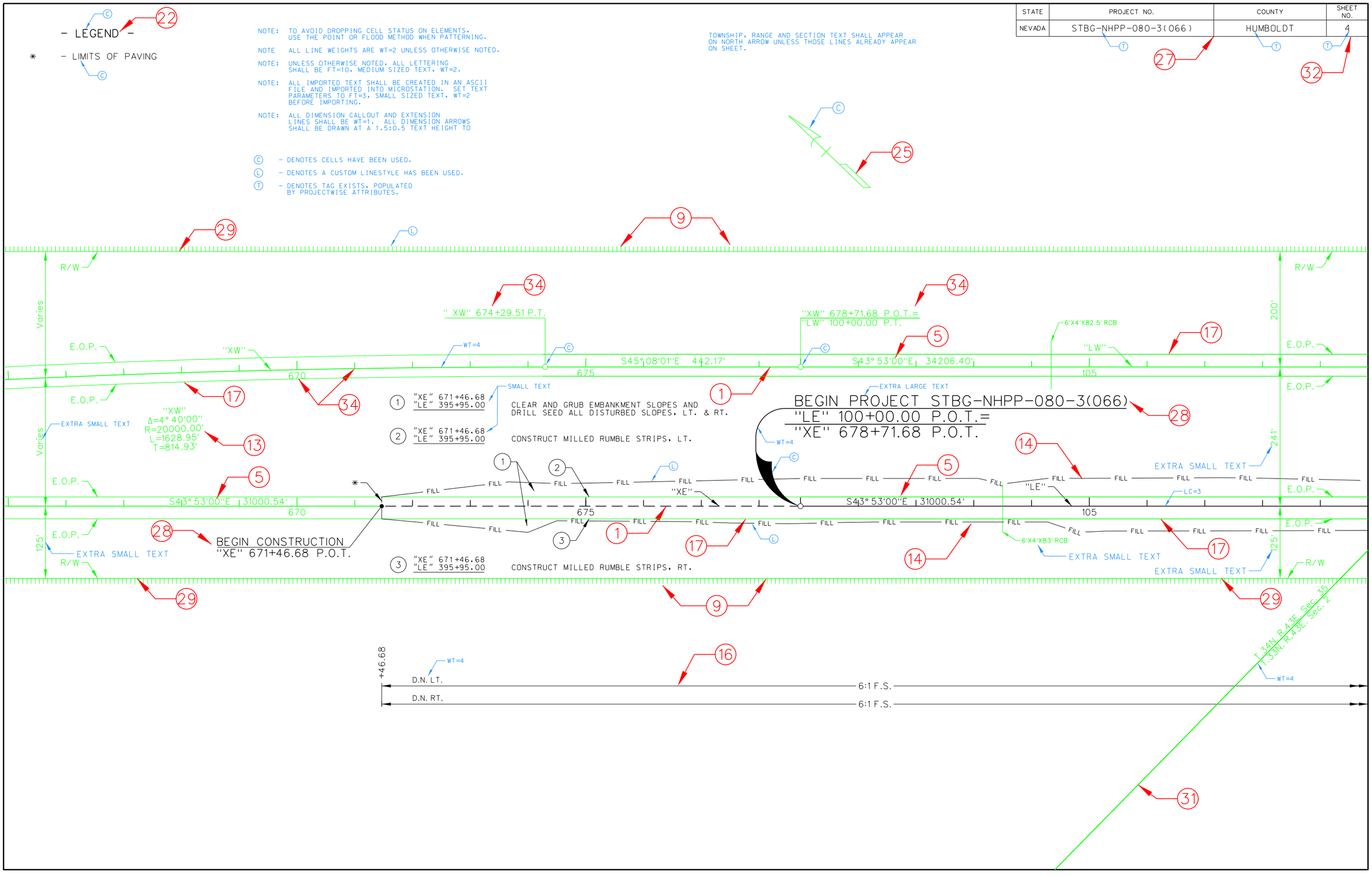
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.



STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	5

- LEGEND -

- LIMITS OF PLANTMIXING MISCELLANEOUS AREAS

- LIMITS OF PAVING

NOTE - PROTECT CATTLE GUARDS IN-PLACE

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

1	"LE" 288+62.50 / "LE" 298+39.00	REMOVE GUARDRAIL, LT. CONSTRUCT CONCRETE BARRIER RAIL (TYPE FA) MODIFIED WITH A FLARED END TERMINAL (METHOD C) AND A GUARDRAIL-BARRIER RAIL CONNECTOR, LT. SEE SHEETS SD1 & SD2 FOR DETAILS.
5	"LE" 298+16.00 / "LE" 298+39.00	REMOVE FENCE LT. CONSTRUCT CLASS 300 RIPRAP SLOPE REVETMENT LT. INSTALL TYPE C-NV-4B FENCE LT. SEE SHEET DD2 FOR DETAILS.
7	"LE" 298+61.00 / "LE" 298+84.00	REMOVE FENCE LT. CONSTRUCT CLASS 300 RIPRAP SLOPE REVETMENT LT. INSTALL TYPE C-NV-4B FENCE LT. SEE SHEET DD2 FOR DETAILS.
9	"LE" 298+61.00 / "LE" 306+00.00	REMOVE GUARDRAIL, LT. CONSTRUCT CONCRETE BARRIER RAIL (TYPE FA) MODIFIED , LT. SEE SHEETS SD1 & SD2 FOR DETAILS.
11	"R1" 6+10.00	INSTALL SPEED DECTOR LOOPS WITH MODIFIED TYPE 5 PULL BOX, LT. (SITE #0130082) CALL STEPHEN HELMS AT (775)888-7474 OR HIS CELL PHONE AT (775)720-6858. FIVE WORKING DAYS'/120-HOURS PRIOR TO THE CUTTING IN THE LOOPS FOR THE EXACT PLACEMENT.
12	"R1" 14+67.00	REMOVE CATTLE GUARD LT. INSTALL 18" X 32' RCP FROM "R1" 14+67 26' LT. (LIE = 4518.50) TO "R1" 14+67 6' RT. (UIE = 4519.15). INSTALL PRECAST END SECTIONS LT. AND RT.
13	"R2" 16+38.00	REMOVE CATTLE GUARD LT. INSTALL 18" X 32' RCP FROM "R2" 16+38 16' LT. (LIE = 4519.15) TO "R2" 16+38 6' RT. (UIE = 4519.83). INSTALL PRECAST END SECTIONS LT. AND RT.
14	"C" 3+60.00	PAVE SPANDREL, 12' LT.
15	"C" 3+60.00	PAVE SPANDREL, 12' RT.
16	"C" 3+82.00	PAVE SPANDREL, 12' LT.
17	"C" 3+82.00	PAVE SPANDREL, 12' RT.
18	"C" 8+60.00	PAVE SPANDREL, 12' LT.
19	"C" 8+60.00	PAVE SPANDREL, 12' RT.
20	"C" 8+81.00	PAVE SPANDREL, 12' RT.
21	"C" 8+81.00	PAVE SPANDREL, 12' RT.

- DENOTES CELLS HAVE BEEN USED.
- DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
- DENOTES TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

T.33N., R.44E.

"LW" 279+00.00 P.O.T.= "R3" 0+00.00 P.O.T. (22.0' RT.)
S45°01'45"E 600.08'
"R3" 6+00.08 P.C.
"R3" Δ=3°39'19" R=3000.00' L=191.39' T=95.73'
"R3" 7+91.47 P.T.
S48°41'04"E 1163.01'
S43°53'00"E 34206.40'
"R4" 19+54.48 P.O.T.= "R3" 19+54.48 P.O.T.
"C" 2+80.16 P.O.B.
S39°14'15"E 955.30'
IR 80-HU 58.714 I-877 W
IR 80-HU 58.714 I-877 E
"LW"
"LE" 282+98.77 P.O.T.= (22.0' LT.) "R1" 0+00.00 P.O.T.
S39°53'00"E 600.54'
S43°53'00"E 31000.54'
"R1" 6+00.54 ∠= 0°38'45"
"R1" 15+55.84 P.O.T.= "R2" 15+55.84 P.O.T.
"C" 11+04.75 P.O.E.
"R1"
"R2"
"LE"
"C"
R/W
E.O.P.
FILL
EXTRA SMALL TEXT
36"X81.5' CMP
36"X84' CMP
30"X80' CMP
24"X36' CMP
Sec. 17
Sec. 18

2	"LE" 289+12.50 / "LE" 298+39.00	REMOVE GUARDRAIL, RT. CONSTRUCT CONCRETE BARRIER RAIL (TYPE FA) MODIFIED WITH A FLARED END TERMINAL (METHOD C) AND A GUARDRAIL-BARRIER RAIL CONNECTOR, RT. SEE SHEETS SD1 & SD2 FOR DETAILS.
3	"LE" 289+79.25	CONSTRUCT CLASS 150 RIPRAP DOWNDRAIN, RT. SEE SHEET DD1 FOR DETAILS.
4	"LE" 290+50.00	CONSTRUCT TYPE 5 EMBANKMENT PROTECTOR, 22' RT.
6	"LE" 298+16.00 / "LE" 298+39.00	REMOVE FENCE RT. CONSTRUCT CLASS 300 RIPRAP SLOPE REVETMENT RT. SEE SHEET DD2 FOR DETAILS.
8	"LE" 298+61.00 / "LE" 298+84.00	REMOVE FENCE RT. CONSTRUCT CLASS 300 RIPRAP SLOPE REVETMENT RT. SEE SHEET DD2 FOR DETAILS.
10	"LE" 298+61.00 / "LE" 308+25.00	REMOVE GUARDRAIL, RT. CONSTRUCT CONCRETE BARRIER RAIL (TYPE FA) MODIFIED , RT. SEE SHEETS SD1 & SD2 FOR DETAILS.

D.N. LT. 6:1 F.S. +50 Transition 6:1 F.S. To 3:1 F.S. Transition 3:1 F.S. To 2:1 F.S. +50
D.N. RT. 6:1 F.S. +00

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-305-1(032)	LANDER	6

- LEGEND -

- LIMITS OF PLANTMIXING MISCELLANEOUS AREAS

- LIMITS OF ENVIRONMENTAL AVOIDANCE AREA

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

EXTRA LARGE TEXT
BEGIN PROJECT SPF-305-1(032)
"E" 417+00.00 P.O.T.

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

T. 30N., R. 44E., SEC. 6, SEC. 7

(1) "B" 426+50.00 REMOVE EXISTING END SECTION LT., INSTALL NEW END SECTION LT.

(2) "B" 431+56.25 CONSTRUCT NEW GUARDRAIL WITH
"B" 435+68.75 FLARED END TREATMENTS, LT.

(3) "B" 430+31.25 CONSTRUCT NEW GUARDRAIL WITH
"B" 434+43.75 FLARED END TREATMENTS, RT.

(4) "B" 438+70.00 PAVE EXISTING MODIFIED TYPE 2A APPROACH (W=25'), RT.

N11° 45'00"W 45110.41' "E" N11° 00'00"W 2350.00' "B"

24" x 48' CMP

8'x6'x48' RCB

M.P. 15.00

BEGIN CONSTRUCTION
END EXCEPTION
"E" 414+00.00 P.O.T.

"E" 422+00.00 P.O.T. = "B" 422+00.00 P.O.T.

BACK N11° 45'00"W N11° 00'00"W AHEAD
BEARING EQUATION

(5) "F" 547+30.00 CONSTRUCT RIP-RAP APRON, LT., (SEE DRAINAGE DETAIL SHT. XX).

(6) "F" 552+25.00 PAVE EXISTING TYPE 2A APPROACH (W=20'), LT.

PERMISSION TO CONSTRUCT

(7) "F" 558+50.00 INSTALL SPEED DETECTOR LOOPS.

(8) "F" 552+50.00 CONSTRUCT MODIFIED TYPE 2A APPROACH, RT.

(9) "F" 552+37.00 +/- TELEPHONE UNDERGROUND CABLE CROSSING. (DO NOT DISTURB)

(10) "F" 552+57.00 +/- 6" STEEL GAS LINE IN 12¾" CASING. (DO NOT DISTURB)

N11° 00'00"W 2350.00' "F" N11° 15'00"W 25000.25'

Cut/Fill Lines

∠ = 00° 15'00" LT.

"B" 445+50.00 P.O.T. = "F" 545+50.00

EARTHWORK BALANCES ONLY SHOWN ON REQUEST FROM THE RESIDENT ENGINEER

D.N. RT.	6:1 F.S. Or 6:1 F.S.~1.0' Ditch~6:1 B.S.
EXCAVATION yd³	500 (425)
EMBANKMENT yd³	425

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

T. 30N., R. 44E., SEC. 6

EXTRA LARGE TEXT
END PROJECT SPF-305-1(032)
"F" 560+00.00 P.O.T.

END CONSTRUCTION
"F" 565+00.00 P.O.T.

* - SAFETY EDGE

4" Plantmix Bituminous Surface With Seal Coat

6" Type 1 Class B Aggregate Base

SECTION A-A

USE PLACE ARROW MARKER

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	IM-015-1(100)	CLARK	7

EXTRA LARGE TEXT

BEGIN PROJECT IM-015-1(100)50

"W" 252+00.00 P.O.T.

"OE" 252+00.00 P.O.T.

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

T.19S. R.62E.

Sec. 31 Sec. 32 Sec. 29 Sec. 32

IR 15-CL 50.21 C-1044 S

IR 15-CL 50.22 C=1046

IR 15-CL 50.15 I-959

IR 15-CL 50.21 C-1044

IR 15-CL 50.20 C-1045

3 SMALL TEXT "W" 275+00.00 REMOVE EXISTING TREE, 132.90' LT. FT=3 WT=1

"R3" 27+67.40 P.T.

"R3" "R3" 22+90.21 P.C. "R3" Δ=15°11'22" R=1800.00' L=477.19' T=240.00'

"R3" 13+89.67 P.C. "R3" Δ=64°10'02" R=550.00' L=615.96' T=344.80' "R3" 20+05.63 P.T.

N63°58'1"E 284.58' N48°46'39"E 519.77'

10' F.B. Ditch

R/W E.O.P. 200' 108'

245 250 255 260 265 270 275

N44°46'39"E 2625.09' "W" WT=4

N44°46'39"E 2560.21' "OE" WT=4

N43°37'54"E 600.00'

"R4" 15 20 25

1 +00.00 22.0' RT. +00.00 22.0' RT. FT=10 SW-1 EXTRA SMALL TEXT

1 SMALL TEXT "OE" 252+00.00 "OE" 257+00.00 WT=1 FT=3 CONSTRUCT SOUNDWALL SW-1. SEE RETAINING WALL AND SOUNDWALL SHEETS.

N00°12'01"W 1389.67'

"R4" 13+50.82 P.C.C.

"R4" Δ=12°52'24" R=3000.00' L=674.05' T=338.45'

"R4" 20+24.87 P.T. (34' RT.) "OE" 269+44.90 P.O.T.=

EXTRA SMALL TEXT 38"x24"x32' RCAP

"R4" Δ=30°57'31" R=2500.00' L=1350.82' T=692.34'

1/4 Sec. Line "R3" 0+00.00 P.O.T. (16' LT.) "L" 107+09.85 P.O.T.=

"R4" 0+00.00 P.C. (16' RT.) "L" 107+09.85 P.O.T.=

"L" LARGE TEXT WT=1 MATCH LINE "A" (SEE SHEET 42)

2 SMALL TEXT "OE" 265+00.00 REMOVE EXISTING TREE, 152.06' RT. FT=3 WT=1

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT NOTES SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPG-395-2(19)	DOUGLAS	8

LEGEND

LIMITS OF PLANTMIXING MISCELLANEOUS AREAS

* LIMITS OF PAVING

FOR ISLAND GEOMETRICS SEE GEOMETRIC AND ELEVATION CONTROL SHEET 16.

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

3 "E" 755+00 INSTALL HIGHWAY LIGHTING SYSTEM AT SR 208 INTERSECTION. (SEE SHEET T-3)

4 "E" 755+00 PAVE TYPE 2 APPROACH (W=24', R=25'), LT.

5 "E" 767+93 REMOVE EXISTING 36" X 30' CMP UNDER EXISTING APPROACH, LT. INSTALL NEW 57" X 38" X 36' CMAP UNDER APPROACH. BUILD UP APPROACH OVER NEW CMAP AS DIRECTED BY THE ENGINEER.

6 "E" 771+18 PAVE TYPE 2 APPROACH (W=24', R=25'), LT.

7 "E" 768+11 "E" 771+06 REGRADE EXISTING F. B. DITCH LT., AND PLACE EXCAVATED MATERIAL ON EAST SIDE OF EXISTING F. B. DITCH. (RENT EQUIPMENT).

8 "E" 771+55 REMOVE EXISTING 12" X 20' CMP UNDER EXISTING DIKE, LT. INSTALL NEW 18" X 20' CMP AT SAME LOCATION. PLACE NEW INLET INVERT ELEVATION 6" BELOW EXISTING.

1 "E" 746+73 REMOVE PORTION OF EXISTING DROP INLET IN MEDIAN ISLAND RT. AS NECESSARY. SALVAGE AND RE-USE STEEL GRATE. ADJUST DROP INLET SO GRATE MATCHES NEW DENSE GRADED ELEVATION (RAISE APPROX. 4"). TRANSITION TYPE 8 CURB AND GUTTER TO MATCH ADJUSTED DROP INLET AS DIRECTED BY THE ENGINEER. (SEE SHEET NO. 16)

2 "E" 754+43 CONSTRUCT NEW TYPE D, ALT. 2, CURB RAMP (A=7'0", B=7'0"), RT.

9 "E" 771+18 PAVE TYPE 2 APPROACH (W=24', R=25'), RT.

10 "E" 755+51 "E" 770+80 REMOVE EXISTING ISLAND CURB AND PORTION OF EXISTING ISLAND. (SEE SHEET NO. 2C & 16)

11 "E" 755+51 "E" 770+31 CONSTRUCT NEW MEDIAN ISLAND. (SEE SHEET NO. 2C & 16)

12 "E" 755+58 REMOVE PORTION OF EXISTING DROP INLET IN MEDIAN ISLAND RT., AS NECESSARY. SALVAGE AND RE-USE STEEL GRATE. ADJUST DROP INLET SO GRATE MATCHES NEW DENSE GRADED ELEVATION (RAISE APPROX. 4"). TRANSITION TYPE 8 CURB AND GUTTER TO MATCH ADJUSTED DROP INLET AS DIRECTED BY THE ENGINEER. (SEE SHEET NO. 16)

13 "E" 771+76 "E" 777+90 REMOVE EXISTING ISLAND CURB AND PORTION OF EXISTING ISLAND. CONSTRUCT NEW MEDIAN ISLAND. (SEE SHEET NO. 2C & 16)

14 "E" 771+90 REMOVE PORTION OF EXISTING DROP INLET IN MEDIAN ISLAND RT., AS NECESSARY. SALVAGE AND RE-USE STEEL GRATE. ADJUST DROP INLET SO GRATE MATCHES NEW DENSE GRADED ELEVATION (RAISE APPROX. 4"). TRANSITION TYPE 8 CURB AND GUTTER TO MATCH ADJUSTED DROP INLET AS DIRECTED BY THE ENGINEER.(SEE SHEET NO. 16)

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

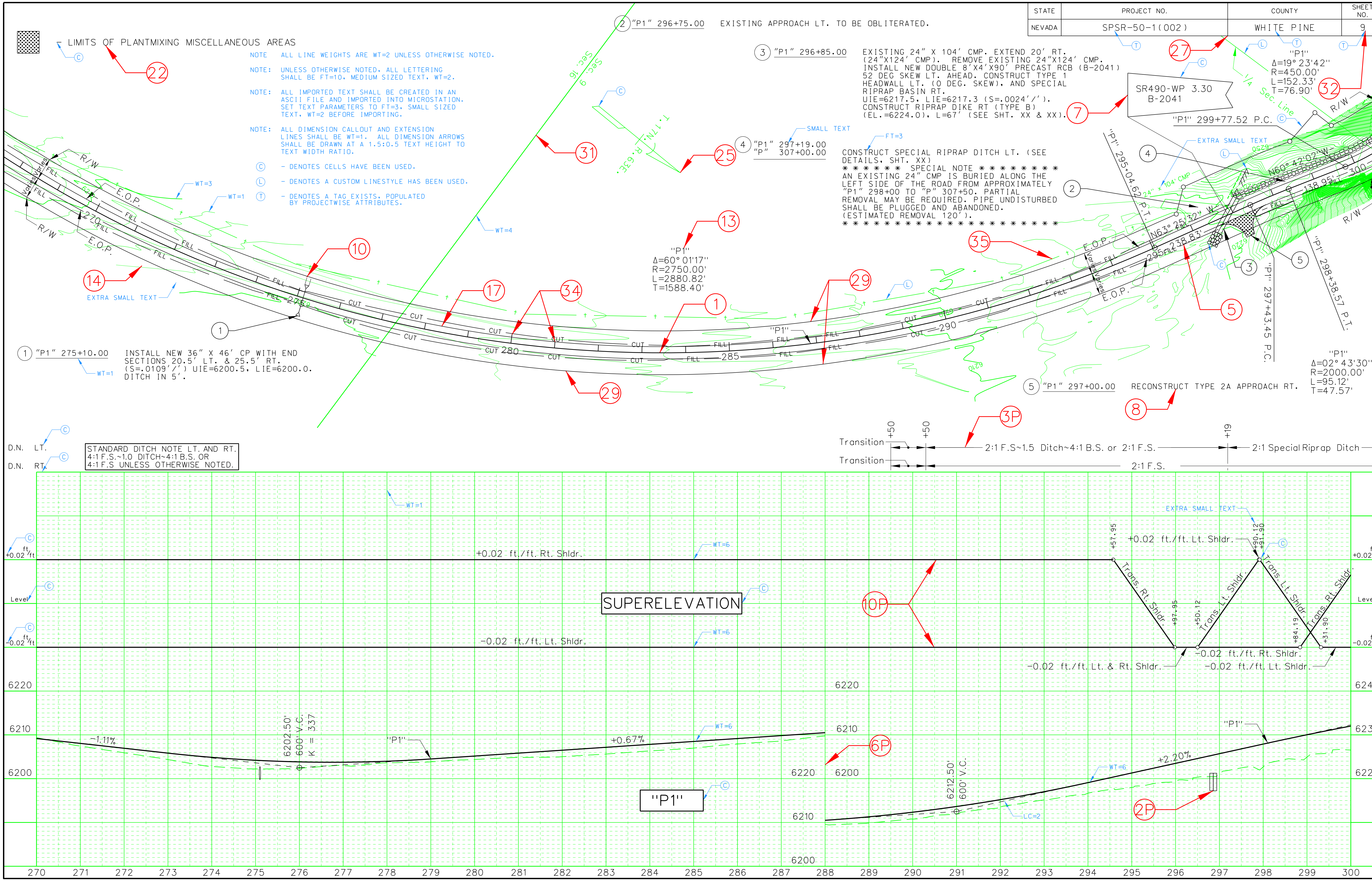
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

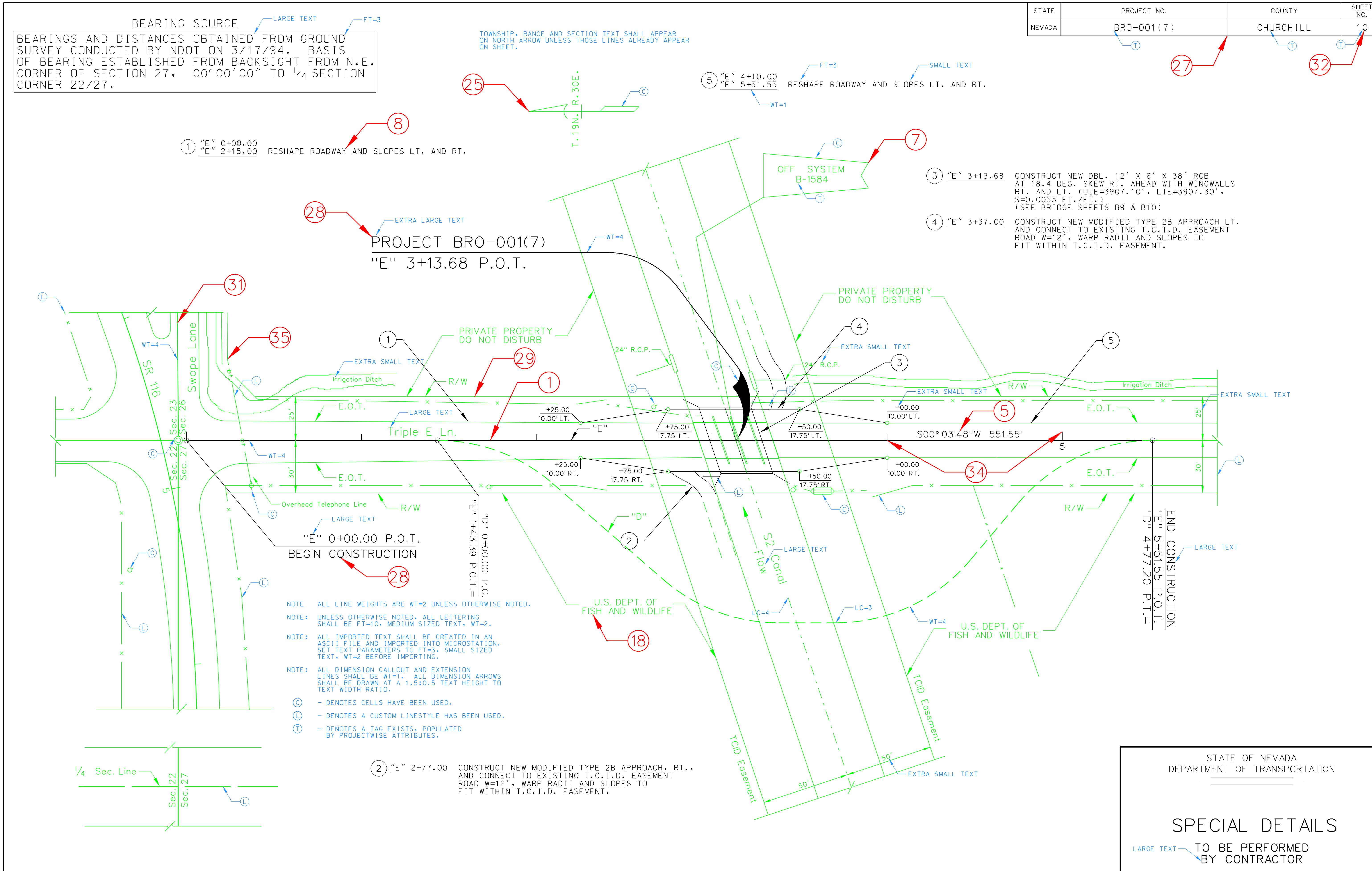
(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



STATE | PROJECT NO. | COUNTY | SHEET NO.
NEVADA | SPSR-50-1(002) | WHITE PINE | 9
LIMITS OF PLANTMIXING MISCELLANEOUS AREAS
NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.
NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.
Ⓒ - DENOTES CELLS HAVE BEEN USED.
Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.
2 "P1" 296+75.00 EXISTING APPROACH LT. TO BE OBLITERATED.
3 "P1" 296+85.00 EXISTING 24" X 104' CMP. EXTEND 20' RT. (24"X124' CMP). REMOVE EXISTING 24"X124' CMP. INSTALL NEW DOUBLE 8'X4'X90' PRECAST RCB (B-2041) 52 DEG SKEW LT. AHEAD. CONSTRUCT TYPE 1 HEADWALL LT. (0 DEG. SKEW), AND SPECIAL RIPRAP BASIN RT. UIE=6217.5, LIE=6217.3 (S=.0024'/'). CONSTRUCT RIPRAP DIKE RT (TYPE B) (EL.=6224.0), L=67' (SEE SHT. XX & XX).
4 "P1" 297+19.00 "P" 307+00.00 CONSTRUCT SPECIAL RIPRAP DITCH LT. (SEE DETAILS, SHT. XX)
****** SPECIAL NOTE ******** AN EXISTING 24" CMP IS BURIED ALONG THE LEFT SIDE OF THE ROAD FROM APPROXIMATELY "P1" 298+00 TO "P" 307+50. PARTIAL REMOVAL MAY BE REQUIRED. PIPE UNDISTURBED SHALL BE PLUGGED AND ABANDONED. (ESTIMATED REMOVAL 120').
SR490-WP 3.30 B-2041
"P1" Δ=19° 23'42" R=450.00' L=152.33' T=76.90'
"P1" 299+77.52 P.C.
"P1" Δ=60° 01'17" R=2750.00' L=2880.82' T=1588.40'
"P1" Δ=02° 43'30" R=2000.00' L=95.12' T=47.57'
"P1" 295+04.62 P.T.
"P1" 297+43.45 P.C.
"P1" 298+38.57 P.T.
N63° 25'32" W 238.83'
N60° 42'02" W 138.95'
1 "P1" 275+10.00 INSTALL NEW 36" X 46' CP WITH END SECTIONS 20.5' LT. & 25.5' RT. (S=.0109'/') UIE=6200.5, LIE=6200.0. DITCH IN 5'.
5 "P1" 297+00.00 RECONSTRUCT TYPE 2A APPROACH RT.
T.17N.,R.63E.
Sec. 6 Sec. 31
1/4 Sec. Line
R/W
E.O.P.
CUT
FILL
EXTRA SMALL TEXT
SMALL TEXT
FT=3
WT=1 WT=3 WT=4 WT=6 LC=2
D.N. LT.
D.N. RT.
STANDARD DITCH NOTE LT. AND RT. 4:1 F.S.~1.0 DITCH~4:1 B.S. OR 4:1 F.S UNLESS OTHERWISE NOTED.
Transition
2:1 F.S.~1.5 Ditch~4:1 B.S. or 2:1 F.S.
2:1 Special Riprap Ditch
2:1 F.S.
SUPERELEVATION
+0.02 ft./ft. Rt. Shldr.
-0.02 ft./ft. Lt. Shldr.
+0.02 ft./ft. Lt. Shldr.
-0.02 ft./ft. Rt. Shldr.
-0.02 ft./ft. Lt. & Rt. Shldr.
Trans. Rt. Shldr.
Trans. Lt. Shldr.
Level
"P1"
-1.11%
+0.67%
+2.20%
6202.50' 600' V.C. K = 337
6212.50' 600' V.C.
6200 6210 6220 6230 6240
270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300


STATE | PROJECT NO. | COUNTY | SHEET NO.
NEVADA | BRO-001(7) | CHURCHILL | 10
BEARING SOURCE
BEARINGS AND DISTANCES OBTAINED FROM GROUND SURVEY CONDUCTED BY NDOT ON 3/17/94. BASIS OF BEARING ESTABLISHED FROM BACKSIGHT FROM N.E. CORNER OF SECTION 27, 00°00'00" TO 1/4 SECTION CORNER 22/27.
TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.
T.19N. R.30E.
① "E" 0+00.00 "E" 2+15.00 RESHAPE ROADWAY AND SLOPES LT. AND RT.
⑤ "E" 4+10.00 "E" 5+51.55 RESHAPE ROADWAY AND SLOPES LT. AND RT.
OFF SYSTEM B-1584
③ "E" 3+13.68 CONSTRUCT NEW DBL. 12' X 6' X 38' RCB AT 18.4 DEG. SKEW RT. AHEAD WITH WINGWALLS RT. AND LT. (UIE=3907.10', LIE=3907.30', S=0.0053 FT./FT.) (SEE BRIDGE SHEETS B9 & B10)
④ "E" 3+37.00 CONSTRUCT NEW MODIFIED TYPE 2B APPROACH LT. AND CONNECT TO EXISTING T.C.I.D. EASEMENT ROAD W=12', WARP RADII AND SLOPES TO FIT WITHIN T.C.I.D. EASEMENT.
PROJECT BRO-001(7)
"E" 3+13.68 P.O.T.
PRIVATE PROPERTY DO NOT DISTURB
SR 116
Swope Lane
Irrigation Ditch
R/W
E.O.T.
Triple E Ln.
S00° 03'48"W 551.55'
Overhead Telephone Line
"E" 0+00.00 P.O.T.
BEGIN CONSTRUCTION
"E" 1+43.39 P.O.T.= "D" 0+00.00 P.C.
"D"
S2 Canal Flow
U.S. DEPT. OF FISH AND WILDLIFE
TCID Easement
END CONSTRUCTION "E" 5+51.55 P.O.T. "D" 4+77.20 P.T.=
Sec. 22 Sec. 23 Sec. 26 Sec. 27
1/4 Sec. Line
NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.
NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.
Ⓒ - DENOTES CELLS HAVE BEEN USED.
Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.
② "E" 2+77.00 CONSTRUCT NEW MODIFIED TYPE 2B APPROACH, RT., AND CONNECT TO EXISTING T.C.I.D. EASEMENT ROAD W=12', WARP RADII AND SLOPES TO FIT WITHIN T.C.I.D. EASEMENT.
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
SPECIAL DETAILS
TO BE PERFORMED BY CONTRACTOR

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	BRO-007(7)	CHURCHILL	11

NOTE: FOR RECONSTRUCTION AND PLACEMENT OF PERMANENT FENCE, SEE THE STRUCTURE LIST.

(4) "E" 2+87.00 / "E" 3+05.00 REMOVE EXISTING FENCE 14' LT.

(5) "D" 0+00.00 / "D" 4+77.20 CONSTRUCT, MAINTAIN AND REMOVE DETOUR ("D" LINE) (SEE SHT. TCX)

(6) "E" 2+51.00 / "E" 3+59.00 CONSTRUCT TEMPORARY FENCE 19' LT. OF "E" 2+51.00 TO 35' LT. OF "E" 2+80.00 THENCE TO 35' LT. OF "E" 3+20.00 THENCE TO 22' LT. OF "E" 3+59.00

(7) "E" 3+16.00 / "E" 3+59.00 REMOVE EXISTING FENCE 18' LT.

(8) "E" 3+13.68 REMOVE EXISTING EARTH BRIDGE, PIPES, OBJECT MARKERS AND WARNING SIGNS. CLEAR AND GRUB THE BRIDGE CONSTRUCTION SITE AS DIRECTED BY THE FIELD ENGINEER.

(1) "E" 1+65.00 / "E" 2+43.00 REMOVE EXISTING FENCE 25' RT.

(2) "E" 1+65.00 / "E" 5+24.00 CONSTRUCT TEMPORARY FENCE 32' RT. OF "D" (DETOUR) ALIGNMENT FROM EXISTING FENCE 25' RT. OF "E" 1+65.00 TO AND ENDING AT 25' RT. OF "E" 5+24.00

(3) "E" 2+69.00 / "E" 3+01.00 REMOVE EXISTING FENCE 25' RT.

(9) "E" 4+50.00 / "E" 5+24.00 REMOVE EXISTING FENCE 25' RT.

END DETOUR
"E" 5+51.55 P.O.T.
"D" 4+77.20 P.T.=

BEGIN DETOUR
"E" 1+43.39 P.O.T.=
"D" 0+00.00 P.C.

"D" 0+71.49 P.T.

"D" 1+55.69 P.C.

"D" 2+27.18 P.T.

"D" 2+59.92 P.C.

"D" 3+47.07 P.T.

"D" 3+90.05 P.C.

"D" Δ = 40° 57'30" R = 100' L = 71.49' T = 37.35'

"D" Δ = 49° 56'08" R = 100' L = 87.15' T = 46.56'

S41° 01'18"W 84.20'

S00° 03'48"E 32.74'

S49° 52'20"E 42.98'

Triple E Ln.

SR 116

Swope Lane

Sec. 22 / Sec. 23 / Sec. 26 / Sec. 27

T. 19N. R. 30E.

TCID Easement

S2 CANAL FLOW

Irrigation Ditch

E.O.T.

R/W

TOWNSHIP, RANGE AND SECTION TEXT SHALL APPEAR ON NORTH ARROW UNLESS THOSE LINES ALREADY APPEAR ON SHEET.

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

D.N. LT. 4:1 F.S. +77.20

D.N. RT. 4:1 F.S.

MATCH EXISTING
"E" 1+43.39 P.O.T.=
"D" 0+00.00 P.C.
3911.41' 100' V.C. K = 41
0.60%
3.06%
3916' 100' V.C. K = 18.4
-2.38%
3911.25' 100' V.C. K = 63
-0.80%
"D" 4+77.20 P.T.=
"E" 5+51.55 P.O.T.
END DETOUR
MATCH EXISTING
3920
3910
3900

"D"

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DETOUR

TO BE PERFORMED BY CHURCHILL COUNTY

6.0 Profiles.

General. Profile sheets include information relating to the vertical disposition of the alignment described in detail below. Profile sheets may contain information such as ditch notes, earthwork notes, and super-elevation transition diagrams. The profile view shall contain information of the original ground as it relates to the alignment. The alignment designation should be identified on each profile sheet in a block near the bottom of the sheet.

In the profile view, it is best that the original ground line extends a few stations beyond the beginning and end of the project. Situate the view in such a fashion so extending the ground line does not add additional sheets. Future grade lines are to be labeled and shown as short dashed lines. Other grade lines, such as ditches, gutters, and pipes are to be shown with distinctive symbols and labeled accordingly.

Roadway profiles are required only when there is a change in the vertical alignment of the roadway under construction. If only a section of the vertical alignment is changed, a profile is required only for that particular area.

On split plan and profile sheets, the station limits within the grid is to match the station limits shown on the corresponding plan view.

Full profile sheets are used to show the profile and profile data of supplemental layout lines, such as frontage roads, crossroads, ramps, ditches, drainage changes, and other roads that cannot be added conveniently to the split plan and profile sheets. Full profile sheets may be used for the mainline profile where a full sheet is needed for the plan layout.

Profile sheets are to be oriented so that stationing progresses from left to right. Where profiles are stacked on a full profile sheet, they are to be arranged so that the stationing progresses from the top of the sheet to the bottom of the sheet.

Names of all major intersected streets, railroads, grade separation structures, streams, etc., are to be labeled along the profile.

Location. The profile of the proposed Section of Improvement shall be shown as it relates to the finished grade. A note in the bridge sheets should also indicate that profile was established from the finished grade as described above. This point should be located as follows:

- Two-lane highways: the profile grade point should be at the normal center of the roadway.
- Divided highways: the profile grade point should be as indicated on the project typical sections.
- The profile grade for ramps (where the ramp is under the control of the mainline grade and cross slope) shall be shown as a broken line and annotated accordingly.

The following information will be shown for all vertical alignments:

- The vertical point of intersection (VPI) of the gradients shall show the elevations. A plus station shall be shown when the VPI occurs between stations (e.g. +97.25).
- Gradients between vertical curves (shown as a percentage and carried out two decimal places).
- Length of each vertical curve. When the gradient rate of change does not require a vertical curve it should be stated "No V.C." in lieu of the length of vertical curve.
- Special ditch grades running parallel to the roadway profile that cannot adequately be shown in the typicals or plans.

Profile Particulars. Specific information for components on the profile sheet as follows:

1P) Bridge structures and their respective structure number shall be shown including the approach slabs, abutments, piers, bottom of deck, and footings, along with the features associated with the crossing such as the top of cross roads, railroads, and bikeways. Show the high water limits of a river crossing. Bridge rails and safety fences are not to be shown. Limits of selected borrow shall be shown and labeled.

2P) Culverts must be shown on the profile sheets at the flow line elevation as it relates to centerline. Show all new and existing culverts on the profiles. Culverts and reinforced concrete boxes (R.C.B.) are shown to scale horizontally, but exaggerated vertically according to the profile.

3P) Ditch notes are to be shown directly above the top grid line of the profile. The cut and fill slopes are to be synchronized to the profile grade stationing. Cut and fill slopes are to be expressed as horizontal to vertical (e.g. 7:1). Use a decimal form for slopes that are not whole numbers (e.g. 3.5:1, 6.5:1, etc.). Do not include “H” or “V” in the labels shown on the plans. Special slope treatments such as benching shall be adequately described and associated to the applicable ditch note. The graph shall only address the slope configurations from the hinge point (usually this point is 1 foot from the edge of pavement) outward to the catch point. Changes in slope ratio should be transitioned a minimum distance along the edge of the road 50 feet for every unit change in ratio. For example, a 200-foot transition length would be required to change from a 2:1 fill slope to a 6:1 fill slope.

4P) Entry and exit elevations are to be shown when there is no entry or exit gradients provided. An example would be when a project begins on a vertical curve; the entry elevation and station would be noted.

5P) Match existing profile/cross-slope is to be indicated on the profiles when applicable. The alignment is to be dashed and noted “Match Existing Profile” with arrows extending to the limits.

6P) Profile elevation shift is used to break the profile to show elements such as pipes in deep fill that would otherwise not be seen. Other examples of profile shifts are on long steep grades where the profile would go beyond the limits of the profile grid; the profile would be broke and shifted in order to show the information on the same sheet.

7P) Project construction limits shall be shown on the profiles with the appropriate stationing.

8P) Sheet numbering for the profile sheets shall be whole numbers following the plan sheets.

9P) Station equations may control arrangement and coverage. Overlap equations shall be plotted in such a way as to permit a gap or space between the back and forward stations.

10P) Super-elevation transition diagram is a graphic plot of the roadway backbone or shoulders that rotate about the alignment. Stationing, super-elevation in percent, and axis of rotation are to be noted. Label the respective shoulders (LT or RT).

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	ACSTP-095-2(16)	CLARK	12

D.N. LT. — Vertical — +66 — +24 — 2:1 F.S. — +89.25 — Structure H-1220 — +05.75 — 2:1 F.S. — +24 — +24 — +02.26

D.N. RT. — 2:1 F.S. — Trans. — 3:1 F.S. — Structure H-1220 — 2:1 F.S. — Trans. — 4:1 F.S.

3P

8P

10P

SUPERELEVATION
-.02 ft./ft. LT. & RT.
UNLESS OTHERWISE NOTED

NOTE: ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

Ⓒ -- DENOTES CELLS HAVE BEEN USED.

Ⓛ -- DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

Ⓣ -- DENOTES A TAG EXISTS. POPULATED BY PROJECTWISE ATTRIBUTES.

2361.78
+55.6 700' V.C.
K = 50

LC=2

WT=6

℄ "C"

LC=4

18.25' Min.

3:1 Slope

Select Borrow

For Slope Limits See Bridge Details

1P

7P

LARGE TEXT

"DF" 14+00.00 P.O.T.
BEGIN CONSTRUCTION

+7.00%

2326.78
300' V.C.
K = 56

MATCH EXISTING

+1.62%

+55.00

4P

Existing Ground

-7.00%

2320.67
320' V.C.
K = 46

+42.26

-.064%

MATCH EXISTING

LARGE TEXT

"DF" 28+02.26 P.O.T.
END CONSTRUCTION

"DF"

2360 2355 2350 2345 2340 2335 2330 2325 2320 2315 2310

14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	BRD-011(12)	WASHOE	13

4:1 F.S. Or 4:1 F.S.~2.0' Ditch~2:1 B.S.

4:1 F.S~2.0' Ditch Thence Warp To R/W

D.N. LT.

D.N. RT.

4:1 F.S. Or 4:1 F.S.~2.0' Ditch~2:1 B.S.

4:1 F.S. Or 4:1 F.S.~2.0' Ditch~2:1 B.S.

+16.97

3P

8P

SMALL TEXT

+62.37

+22.37

+09.84

+69.84

+16.97

+0.02 ft./ft. Lt. Shldr.

+0.02 ft./ft. Rt. Shldr.

+0.02 ft./ft. Lt. Shldr.

Trans. Rt. Shldr.

Trans. Lt. Shldr.

Level

WT=6

-0.02 ft./ft. Rt. Shldr.

-0.02 ft./ft. Lt. Shldr.

-0.02 ft./ft. Rt. Shldr.

Trans. Lt. Shldr.

Trans. Rt. Shldr.

10P

SUPERELEVATION

5P

"Second St."
Match Existing X-Slope

4823.98'
100' V.C.
K = 15

4818.80'
100' V.C.
K = 13

LC=2

WT=6

-3.19%

+4.48%

+66.97

+50

2P

+12.44

"S" 540+36.80 P.O.C.
Match Existing "Second Street" Cross Slope

"DC"

+3.30%

Existing Ground

4791'
@ 400' V.C.
K = 440

"AC" 13+00.00 P.O.C.=

"DC" 12+50.00 P.O.C.

9P

"AC"

"First St."

+00.00 @ 4764.92

4761.50
200' V.C.
K = 34

+4.21%

-1.72%

4P

"F" 563+42.76 P.O.T.
MATCH EXISTING
"FIRST ST" X-SLOPE

"AC"

"DC"

NOTE: ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION, CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 3.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

7.0 Grading Plan.

General. Grading plans show the configuration of embankments and excavations when these items are variable, warped, or complex.

Other examples of grading plans are blending the paving of opposing cross slopes at intersections, contour fills or cuts, special drainage basins, etc. Grading plans are only used when the plans cannot adequately convey this information through the use of ditch notes, slope catch point lines, super-elevation diagrams, etc.

Grading Plan Guidelines. On large complex projects, contour grading shall be shown on separate sheets. Contour grading, when minimal, may be shown on plan sheets where the addition of the contour grading does not clutter or confuse the plan sheet.

A grading plan must show all completed grading elements for the subject area including any work for constructing traffic barriers, traffic control devices, drainage, landscaping, pioneering or maintenance roads, and structures.

Work with the Hydraulics Engineer to ensure all grading is compatible with drainage designs.

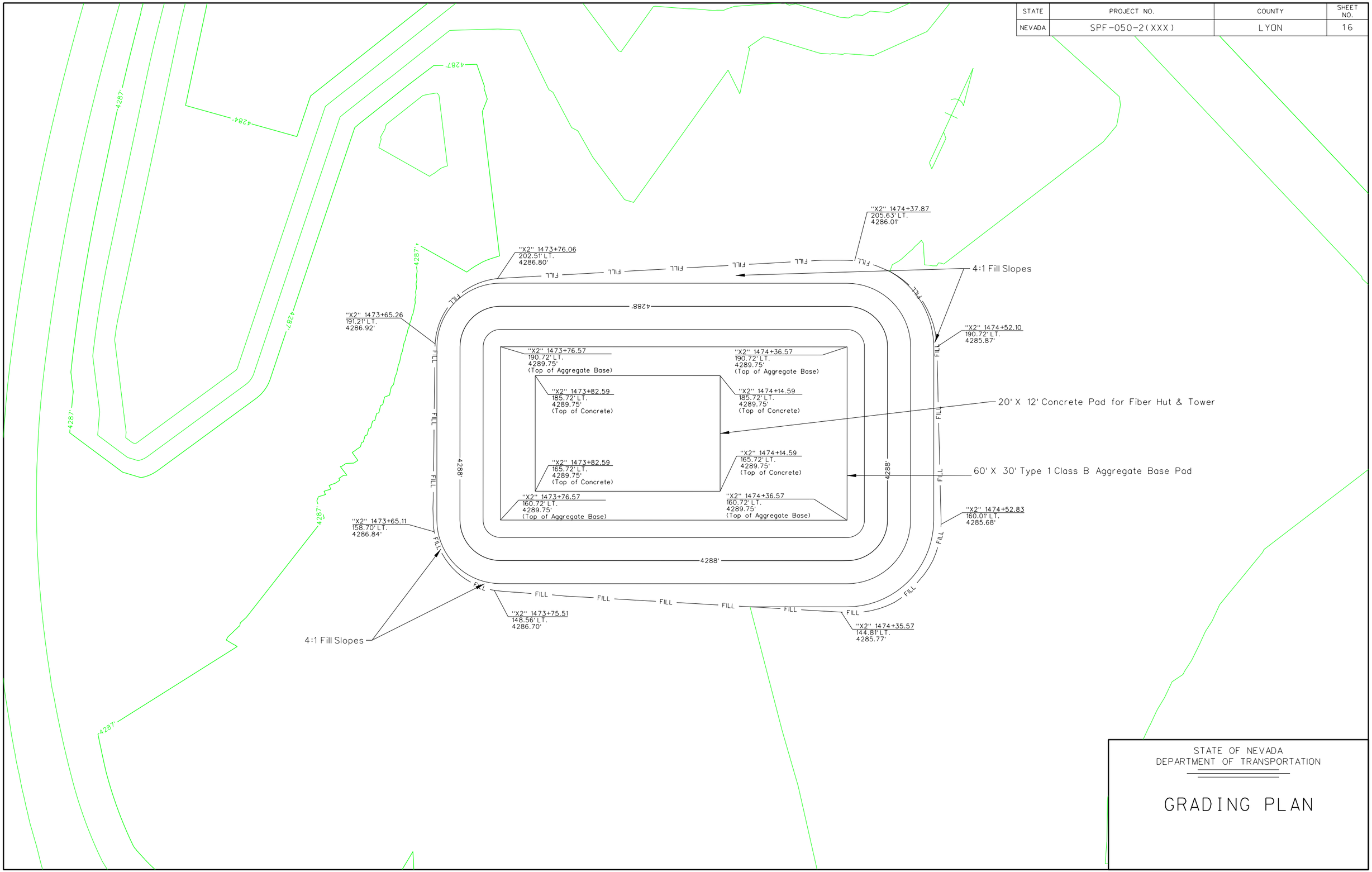
Place the following note on each contour-grading sheet: “Grading plan is accurate for contouring work only.”

Grading Plan Particulars. Specific information for components on the grading plans as follows:

1) Existing contours shall appear in green and the proposed contours shall be shown as solid black lines. Show contour elevations in 1-foot intervals with every two-foot interval with a heavier solid black line with the appropriate elevation. Centerline, stationing, edge of oil, north arrow, right of way, etc., should also be included in the plan for reference. Do not allow existing contours to overlap over the proposed surface contours. Use the same scale and contour intervals for both existing and proposed surfaces.

2) Sheet numbering for the grading sheets shall be whole numbers following the plan and profile sheets.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-050-2(XXX)	LYON	16



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

GRADING PLAN

8.0 Geometrics and Elevation Control.

General. Geometric and elevation control sheets provides detail that cannot be adequately shown on the plans sheets. New interchanges, intersections, islands, curb, gutter, and sidewalk usually require geometric sheets in order to clearly show this information without cluttering the plan sheets.

Geometrics and Elevation Control Guidelines. The location control lines shall be shown with the appropriate line designation. Show only existing infrastructure or topography that is needed to show relationship to the proposed improvements.

Dimension all features with station/offsets where they change in relation to the control line. Display bearings and distances along with curve data. See Standard Plans for referencing dimension offset to the various types of curb and gutter. Identify the type of curb and gutter to be modified or constructed.

For control at flow lines, such as curb and gutter, flat bottom ditches, etc., the information should include the station/offset and elevation. Normally, control for curb and gutter should be displayed every 25 feet. When depicting control for curb and gutter, avoid developing elevations that constructs random slopes between a series of control points. It is best to maintain a constant slope on a given length of curb and gutter.

Accuracy is to be shown to one hundredth of a foot (e.g. +97.30, 23.56’ RT) for stationing, offsets and elevations.

Geometrics and Elevation Control Particulars.

1) Curve data shall contain delta, radius, length, and tangent information respectively. Curve information is usually shown with an alpha or numeric numbering system pointing to the appropriate curve. A corresponding table with the alpha or number character is included with the pertinent curve information.

2) Sheet numbering for the geometric sheets shall be whole numbers following the plan, profile, and grading sheets.

3) Tangent information shall contain bearing and distance. Bearing information is to include the heading and the distance is to be carried out two decimal places (N29^14’26”E 3536.94’) (Note: the ^ symbol translates to the degree sign in Microstation).

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-573(001)	CLARK	17

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

FT=3 SMALL TEXT

NO.	RADIUS	DELTA	LENGTH	TANGENT
7	2.00'	180°00'00"	6.28'	-
8	45.00'	47°59'06"	37.69'	20.03'
9	8.00'	180°00'00"	25.13'	-
10	2.00'	133°22'00"	4.66'	4.64'
11	2.00'	118°11'01"	4.13'	3.34'
12	85.00'	23°05'13"	34.25'	17.36'
13	2.00'	131°32'12"	4.59'	4.44'
14	2.00'	149°37'46"	5.22'	7.37'
15	125.50'	27°14'39"	59.68'	30.41'
16	5.00'	90°00'00"	7.85'	5.00'
17	2.00'	160°58'22"	5.62'	11.93'
18	46.75'	132°18'54"	107.96'	105.78'

T.20S. R.70E. SEC. 16

"R2B" "LS" 155 LARGE TEXT 115 "LN"

USE PLACE ARROW MARKER LARGE TEXT Craig Rd. (SR 573)

LARGE TEXT DD 12 LC=3

EXTRA SMALL TEXT N88°51'06"E 381.00'

N88°51'06"E 381.00' 130

+52.00 6.00' LT. +52.00 2.00' LT.

TYPE A GLUE DOWN CURB EXTRA SMALL TEXT

SECTION BB 12 SHEET NO.

"R4" 2.5

+78.35 135.65' LT. E.O.P.

EXTRA SMALL TEXT +68.40 90.00' LT.

TYPE D MODIFIED CURB RAMP

EXTRA SMALL TEXT TYPE 5 C&G 5' SIDEWALK

WT=1 N88°51'06"E 220.00'

+12.90 57.50' LT.

+31.38 84.67' LT. +34.77 84.08' LT.

TYPE B CURB RAMP +53.09 55.42' LT.

N39°36'47"E 41.48' +04.30 53.25' LT.

N86°14'47"E 45.89' +05.91 49.95' LT.

+51.75 52.03' LT. TYPE A GLUE DOWN CURB

DD 12

LARGE TEXT MATCH LINE "YY" (SEE SHT. 14)

"Xe"

+70.21 8.00' LT. +70.21 8.00' RT. TYPE A GLUE DOWN CURB

BB 12 3

+67.03 50.50' RT. N88°03'44"E 145.17'

EXTRA SMALL TEXT TYPE A GLUE DOWN CURB +12.19 48.50' RT.

+12.84 52.39' RT. (MATCH EXIST.)

+62.03 55.50' RT. N01°08'54"W 22.85' +62.03 78.35' RT.

+48.11 135.80' RT. +50.95 138.41' RT. (MATCH EXIST.)

"R3A" "R3" 20

LIMITS OF REMOVAL (COLD MILLING)

LIMITS OF REMOVAL

SAW CUT Varies ISLAND

EXTRA LARGE TEXT

SECTION B-B (AS CONSTRUCTED)

4" CLASS A STAMPED CONCRETE Varies

TYPE A GLUE DOWN CURB TYPE A GLUE DOWN CURB

2" TYPE 1 CLASS B AGGREGATE BASE

EXTRA LARGE TEXT

SECTION D-D

"Xe" 125+22.40 P.O.T. TO "Xe" 130+52.00 P.O.T.
"Xe" 137+27.40 P.O.T. TO "Xe" 141+51.00 P.O.T.

SMALL TEXT FT=3

1.0' 4" CLASS A STAMPED CONCRETE

TYPE A GLUE DOWN CURB EXISTING ISLAND

2" TYPE 1 CLASS B AGGREGATE BASE

EXTRA LARGE TEXT FT=3

SECTION B-B (MODIFIED) SMALL TEXT

"Xe" 121+92.62 P.O.T. TO "Xe" 121+97.30 P.O.T.
"Xe" 131+70.21 P.O.T. TO "Xe" 131+70.21 P.O.T.
"Xe" 131+48.11 P.O.T. TO "Xe" 133+12.84 P.O.T.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

GEOMETRICS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-573(001)	CLARK	18

MATCH LINE "YY" (SEE SHT. 13)

N88° 51'06"E 220.00'

TYPE 5 C&G

4.5' SIDEWALK

+33.00
57.50' LT.

S86° 51'45"E 180.50'

+13.00
44.00' LT.

USE PLACE ARROW MARKER

LARGE TEXT

Craig Rd. (SR 573)

LARGE TEXT

DD
12

+08.00
8.00' LT. (MATCH EXIST.)

"Xe"

135

"Xe"

+08.00
8.00' RT. (MATCH EXIST.)

19

+67.70
2.00' RT.

EXTRA SMALL TEXT

N88° 51'06"E 55.94'

20

+27.40
4.00' LT.

EXTRA SMALL TEXT

SECTION

DD
12

SHEET NO.

3

EXTRA SMALL TEXT

+57.00
8.00' LT.

N88° 51'17"E 349.00'

N88° 51'35"E 367.66'

TYPE A GLUE DOWN CURB

MATCH LINE "ZZ"

2

"R3"

"Xe" 137+83.34 Δ=00°00'29" RT.

+83.34
4.00' LT.

+58.00 (BEGIN TYPE 5 C&G)
60.00' RT.

N88° 51'06"E 352.51'

TYPE 5 C&G

L

Mitchell St.

LARGE TEXT

L

1

NO	RADIUS	DELTA	LENGTH	TANGENT
19	300.00'	11°28'42"	60.10'	30.15'
20	300.00'	11°28'42"	60.10'	30.15'
21	1.75'	180°00'00"	5.50'	–
22	75.00'	90°04'48"	117.91'	75.10'

FT=3

SMALL TEXT

LARGE TEXT

Craig Rd. (SR 573)

EXTRA SMALL TEXT

DD
12

+07.00
7.50' LT.

N88° 51'21"E 50.00'

TYPE A GLUE DOWN CURB

N88° 51'18"E 144.00'

+51.00
7.50' LT.

21

"Xe"

"M"

N88° 51'35"E 367.66'

140

+51.00
4.00' LT.

"P"

T.20S. R.70E.
SEC. 16

C

+10.50
60.00' RT.

TYPE 5 C&G

TYPE 5 C&G

5.0' SIDEWALK

22

+85.50
135.00' RT.

Pecos Rd.

LARGE TEXT

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) – DENOTES CELLS HAVE BEEN USED.

(L) – DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) – DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

GEOMETRICS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STP-0396(003)	PERSHING	19

NOTE: STATION, OFFSET, ELEVATION IS TO FLOWLINE (FT=3)

NOTE ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

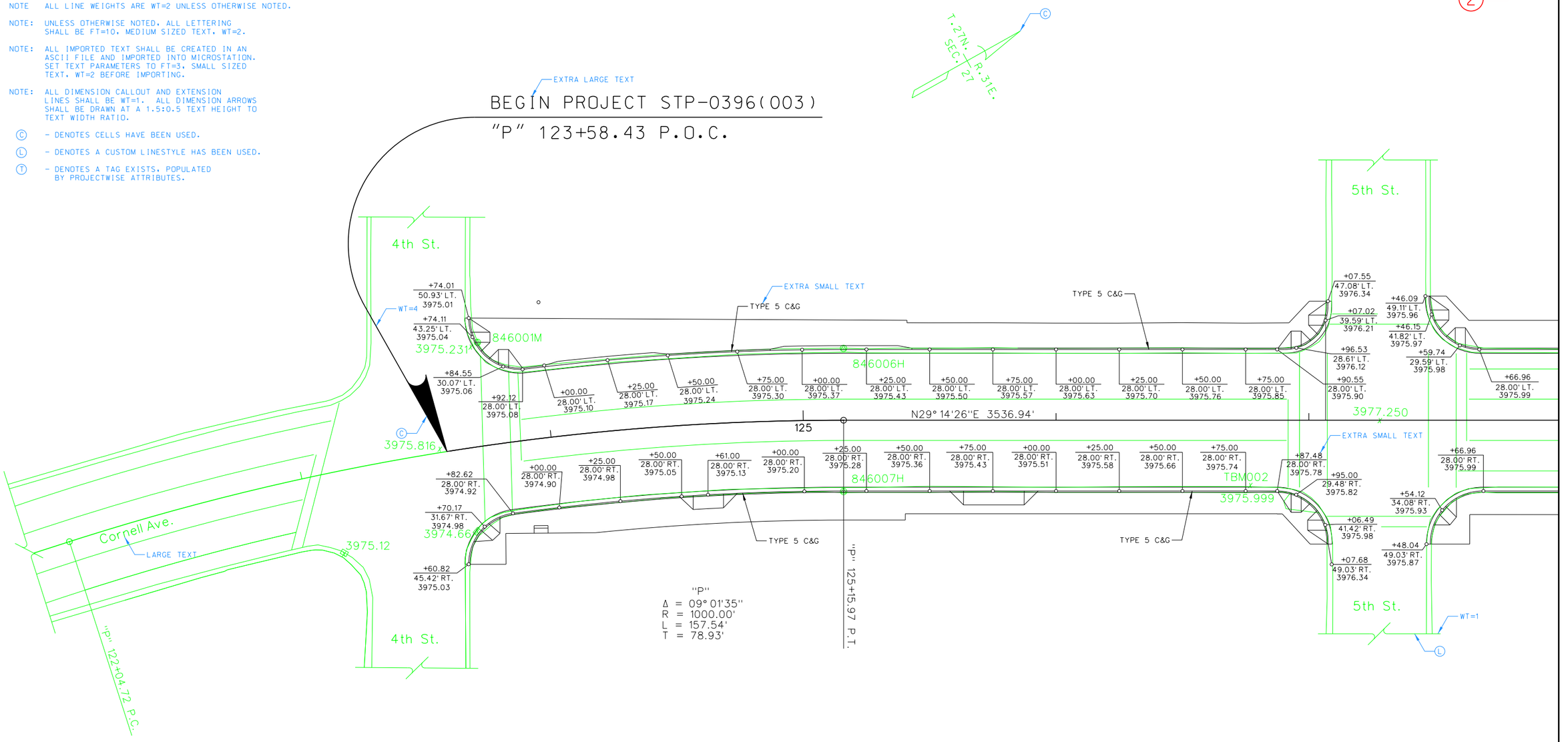
NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

ELEVATION CONTROL (T)

9.0 Location Control.

General. The location control sheet establishes the relationship of the project geometrics to the land in accordance with standard industry practices and state and local laws and regulations.

Location Control Guidelines. The Location Division, in cooperation with the designer, is responsible for producing the location control sheets. The designer is responsible for ensuring that location control is included in the final contract documents for all projects. Any new alignments developed by the designer, and to be adopted in the field, are to be coordinated with the Location Division.

The layout of the location control sheets shall be as established by the Location Engineer.

The Location Division will provide the designer with a mathematic definition of the existing project control line that has been adjusted to current datum and within modern levels of precision.

The information normally contains a description of the basis of bearing, a listing of monuments near the project site and a mathematic definition of the primary project alignments. The location control may constitute a retrace of existing alignments, new alignments or a combination of both.

Location Control Particulars. Specific information for components on the location control are as follows:

1) Angle point for a given tangent must show the angle of deflection.

2) Bearings for a given tangent showing heading and distance.

3) Bearing source is provided by the Location Division. Further information can be found in the NDOT "Special Instructions for Survey, Mapping for GIS Consultants," Current Edition.

4) Cadastral table is provided by the Location Division. Further information can be found in the NDOT "Special Instructions for Survey, Mapping for GIS Consultants," Current Edition.

5) Center of Curvature is the center of the circular segment.

6) Construction control table is provided by the Location Division. Further information can be found in the NDOT "Special Instructions for Survey, Mapping for GIS Consultants," Current Edition.

7) Project number and county need to be shown in the upper right corner and placed in the appropriate designated boxes.

8) Delta or intersection angle or degree of curvature is the angle between semi-tangents of a curve or also segment of a circle subtended by a curve.

9) Easting coordinates are calculated by the Location Division.

10) Length of curve is the length of curve from P.C. to P.T.

11) LPN is the Location Project Number and is assigned by the Location Division.

12) Northing coordinates are calculated by the Location Division.

13) PI is the Point of Intersection of the tangents extended.

14) Point of curvature is the beginning of the curve.

15) Point of reverse curve is a point common to two curves in opposite directions and with the same or different radii.

16) Point of tangency is the end of the curve.

17) Radius is the distance from the center point of the curve to the Point of Curvature (P.C.) or Point of Tangency (P.T.).

18) Sheet numbering for the location control sheets shall be numbered LC1, LC2, LC3, etc. In the absence of control sheets, the "Bearing Source" must be established by the plan preparer, approved by the Location Division and shown on the first plan sheet.

19) Special note is provided by the Location Division and is reserved for information that surveyors may need during the execution of the Contract Plans. In the example provided, the perpetuation of PLSS Monuments is described and further information concerning this example can be found in the NDOT "Special Instructions For Survey, Mapping for GIS Consultants," Current Edition.

20) Station equation is a point in stationing where an equation is put in to correct a gap or overlap in stationing.

21) Station equality is a point in stationing where a line name is changed, but the stationing remains unchanged.

22) Tangent distance is the distance from either the Point of Curvature (P.C.) or the Point of Tangency (P.T.) to the Point of Intersection (P.I.).

23) Vertical datum is provided by the Location Division. Further information can be found in the NDOT "Special Instructions for Survey, Mapping for GIS Consultants," Current Edition.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	LC01

VERTICAL DATUM: ELEVATIONS ARE BASED UPON NAVD88 HOLDING PUBLISHED NGS CONTROL POINTS: J_346W, L_346W, & NW_BASE AS FIXED.

BEARING SOURCE: BEARINGS OF THIS MAP WERE DERIVED FROM NEVADA STATE PLANE COORDINATES NAD 83/94 DATUM CENTRAL ZONE, WITH A MEAN CONVERGENCY OF -0°13'02" USING LOCAL CONTROL POINTS: J_346W, L_346W, & NW_BASE AS FIXED AND IS FURTHER ARCHIVED AT NDOT UNDER FILE LPN1329. COORDINATES AND DISTANCES REFLECT A SINGLE COMBINATION GROUND TO GRID FACTOR OF 0.9996910945 AND HAVE BEEN CONVERTED TO FEET. MONUMENTS ARE STAMPED WITH "NDOT" AND MONUMENT NAME UNLESS NOTED IN DESCRIPTION.

SPECIAL NOTE: PLSS MONUMENTS LISTED IN THIS CONTRACT ARE REQUIRED TO BE PERPETUATED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF NEVADA TO ASSURE COMPLIANCE WITH NEVADA REVISED STATUTES, CHAPTERS 329 & 625. ANY MONUMENTS FOUND DURING SURVEY, MAPPING, CONSTRUCTION OR MAINTENANCE PHASES OF NEVADA DEPARTMENT OF TRANSPORTATION PROJECTS NOT LISTED FOR PERPETUATION IN THE CONTRACT PLANS SHALL BE PERPETUATED IN ACCORDANCE WITH THE STATE OF NEVADA DEPARTMENT OF TRANSPORTATION, TRANSPORTATION POLICY (TP) 3-1-3, TITLED PERPETUATION OF SURVEY MONUMENTS, DATED JANUARY 13, 1999.

CONSTRUCTION CONTROL

NAME	NORTHING	EASTING	ELEVATION	OLD STATION	EQUATION	DISTANCE(')	NEW STATION	DISTANCE(')	NOTE
NW_BASE	21879092.63	1526236.93	4528.80				"LE" 190+95.76 POT	-681.39	USC&GS BRASS DISK
1329002H	21878565.26	1525694.70	4537.06GP	"OE" 1406+00.00 POT		75.08	"LE" 190+99.99 POT	74.99	NHD BRASS DISK
1329001H	21878825.81	1525965.69	4532.89GP	"OW" 1406+00.00 POT		60	"LE" 191+00.05 POT	-300.94	NHD BRASS DISK
1329003H	21873648.99	1530944.43	4514.86GP	"OW" 1477+56.13 POT		60	"LE" 262+82.48 POT	-300.84	NHD BRASS DISK
1329004H	21873398.60	1530684.24	4517.87GP	"OE" 1477+82.10 POT		60	"LE" 262+82.58 POT	60.26	NHD BRASS DISK
1329006H	21868876.25	1535047.16	4528.62GP	"OE" 1540+65.97 POT		50	"LE" 325+66.42 POT	50.53	NHD BRASS DISK
1329005H	21869119.69	1535300.50	4525.74GP	"OW" 1540+65.97 POT		60.09	"LE" 325+66.58 POT	-300.82	NHD BRASS DISK
1329008H	21862790.79	1540886.82	4519.27GP	"OE" 1625+00.00		60	"LE" 410+00.54 POT	59.97	NHD BRASS DISK
1329007H	21863004.69	1541181.56	4512.72GP	"OW" 1625+00.00		78	"LE" 410+51.38 POT	-300.62	NHD BRASS DISK
1329011H	21860414.41	1543348.90	4515.51GP	"OE" 1659+19.48	"OE" 0+00.00	60 @ 130°	"LE" 444+20.16 POT	-59.39	NHD BRASS DISK
1329012H	21860320.62	1543251.83	4517.02GP	"OE" 1659+19.48	"OE" 0+00.00	74.95 @ 130°	"LE" 444+20.16 POT	75.59	NHD BRASS DISK
1329010H	21860493.47	1543431.26	4514.54GP	"OW" 1659+19.48	"OW" 0+00.00	59.85	"LE" 444+20.54 POT	-173.55	NHD BRASS DISK
1329009H	21860577.81	1543518.82	4513.80GP	"OW" 1659+19.48	"OW" 0+00.00	61.71	"LE" 444+20.73 POT	-295.12	NHD BRASS DISK
J_346W	21859506.79	1545033.68	4510.17				"LE" 462+43.56 POT	-640.32	USC&GS BRASS DISK
1329015H	21855252.83	1548336.25	4511.44GP	"OE" 71+77.22 POT		60	"LE" 515+97.60 POT	-59.47	NHD BRASS DISK
1329016H	21855169.45	1548249.97	4512.38GP	"OE" 71+77.22		60	"LE" 515+97.61 POT	60.52	NHD BRASS DISK
1329014H	21855321.64	1548407.97	4510.79GP	"OE" 71+77.22		60.04	"LE" 515+97.95 POT	-158.86	NHD BRASS DISK
1329013H	21855404.86	1548494.46	4510.04GP	"OW" 71+77.22		60	"LE" 515+98.20 POT	-278.88	NHD BRASS DISK
1329020H	21853091.19	1550257.96	4509.56GP	"OE" 100+66.89 POT		60.12	"LE" 544+87.45 POT	60.57	NHD BRASS DISK
1329019H	21853174.49	1550344.31	4508.32GP	"OE" 100+66.89 POT		59.93	"LE" 544+87.55 POT	-59.41	NHD BRASS DISK
1329018H	21853239.41	1550411.82	4507.82GP	"OW1" 100+66.87 POT		59.98	"LE" 544+87.77 POT	-153.07	NHD BRASS DISK
1329017H	21853322.61	1550498.18	4507.48GP	"OW1" 100+66.87 POT		60	"LE" 544+87.95 POT	-272.99	NHD BRASS DISK
1329021H	21848112.27	1555083.67	4500.39GP	"OE" 170+00.00 POT		49.43	"LE" 614+21.21 POT	49.81	NHD BRASS DISK
268049H	21848213.78	1555188.77	4500.61GP	"OE" 170+00.00 POT		96.71	"LE" 614+21.24 POT	-96.31	NHD BRASS DISK
1329022H	21845846.67	1557232.20	4502.61GP	"OE" 210+21.54 POT		78.87	"LE" 645+43.43 POT	78.97	NHD BRASS DISK
1329023H	21844556.18	1558472.18	4504.50GP	"OE1" 219+11.96 POT	"BE" 219+11.96 PC	83.91	"LE" 663+33.10 POC	83.95	NHD BRASS DISK
268050H	21844679.22	1558599.57	4503.65GP	"OE1" 219+11.96 POT	"BE" 219+11.96 PC	93.18	"LE" 663+33.13 POC	-93.16	NHD BRASS DISK
1329025H	21841633.10	1560596.31	4508.23GP	"BW1" 256+05.63 PT	"BW" 256+04.86 POT	63.95	"LE" 699+65.81 POC	-69.68	NHD BRASS DISK
1329024H	21841686.63	1560727.97	4508.80GP	"BW1" 256+05.63 PT	"BW" 256+04.86 POT	78.15	"LE" 699+68.42 POC	-211.78	NHD BRASS DISK
268060H	21841463.39	1560659.95	4507.93GP	"BE" 257+24.73 PT	"BE" 257+85.92 POT	62.81	"LE" 701+45.74 POC	-62.94	NHD BRASS DISK
1329026H	21841421.64	1560557.52	4509.73GP	"BE" 257+24.73 PT	"BE" 257+85.92 POT	47.83	"LE" 701+45.75 POC	47.67	NHD BRASS DISK
290008H	21837748.20	1562177.99	4513.54GP	"BE" 297+99.14		66.83	"LE" 742+19.33 POT	-66.80	NHD BRASS DISK
268061H	21836155.16	1562822.79	4514.76GP	"BE" 315+17.73 PC		62.74	"LE" 759+37.91 POT	-62.79	NHD BRASS DISK
1329027H	21836209.27	1562955.61	4514.80GP	"BW" 315+17.73 PC		74.05	"LE" 759+37.93 POT	-206.21	NHD BRASS DISK
1329028H	21836099.03	1562685.15	4515.00GP	"BW" 315+17.73 PC		85.8	"LE" 759+37.96 POT	85.86	NHD BRASS DISK

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LOCATION CONTROL

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	LC02

PROJECT ALIGNMENT
LPN 1329 - I-80 EASTBOUND CENTERLINE RETRACEMENT
"LE" 100+00.00 POT to "LE" 796+34.42 POT
CONTRACT #1162, #1832, LPN1038, & LPN1183
MP HU 54.87 to MP HU 61.39 & MP LA 0.00 to MP LA 6.65
Horz = NAD83/94 CENTRAL Zone g(f) = 0.9996910945
1/29/2015

ALIGNMENT

"OE"	1315+00.00	P.O.T. =	{CONTRACT #1162}			
"XE"	678+71.68	P.O.T. =	(LPN 1038)	(COORD. EQ.)	15321991.831	3034464.028
"LE"	100+00.00	P.O.T.			21885176.087	1519440.710
				S 43°53'00" E - 31000.54'		
"LE"	410+00.54	A.P.			21862832.360	1540930.044
				S 44°00'57" E - 3447.28'		
"LE"	444+47.82	P.O.T.	(APPROX. HU/LA CO. LINE)		21860353.254	1543325.413
				S 44°00'57" E - 16973.39'		
"LE"	614+21.21	P.O.T. =			21848146.881	1555119.491
"OE1"	170+00.00	P.O.T. =				
"TE"	0+00.00	P.O.T.	{CONTRACT #1832}			
				S 44°00'57" E - 4911.79'		
"LE"	663+33.00	P.C.			21844614.578	1558532.484
			R = 10000.00'			
			D = 21°50'45" Rt			
		P.I.			21843226.734	1559873.450
		C.C.			21837666.006	1551341.006
			L = 3812.82'			
			T = 1929.84'			
"LE"	701+45.82	P.T. =			21841439.564	1560601.689
"LE"	702+06.05	P.O.T.				
				S 22°10'12" E - 5737.48'		
"LE"	759+43.53	P.C.			21836126.266	1562766.761
			R = 5132.00'			
			D = 41°12'24" Lt			
		P.I.			21834339.573	1563494.806
		C.C.			21838062.857	1567519.344
			L = 3690.89'			
			T = 1929.33'			
"LE"	796+34.42	P.T. =			21833474.994	1565219.575
"PE"	100+00.00	P.O.T. =	(LPN 1183)			
"OE1"	350+73.51	P.O.T.				

ALIGNMENT CONTINUED

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LOCATION CONTROL

10.0 Special Details.

General. Special details illustrate methods of construction, types of materials and methods of measurement for non-standard designs to ensure the contractor has a clear picture of the work that is to be performed. It is important the details be complete, meaningful, and necessary.

Special details supply supplementary information that cannot be adequately shown on the plan sheets because of their complexity. The Standard Plans are part of the contract plans. Before developing special details, examine the standards to see if the details provided are sufficient. Special details usually cover information that are not found in the Standard Plans or are modifications thereof.

Other examples of construction details are elevation control sheets and geometrics. For more information, see Section 8 for Geometric and Elevation Controls.

Special Detail Guidelines. Special detail sheets should reflect the same drafting standards and level of detail as the Standard Plans. All details necessary for the construction and measurement of the subject feature shall be incorporated into the detail. Details must be complete because the contractor is only obligated to provide what is shown on the detail.

These sheets are prepared to a larger scale than the plan sheets, such as 1:20 or larger (They may be labeled not to scale). Items need to be fully dimensioned so that they are constructible and the quantities are calculable. Examples of construction details are curb transitions, sidewalks, driveways, drainage basins, etc.

Normally a top, side and front view should be provided and, for certain details, a perspective view should be used to show the intended result. Notes shall be included as required to further clarify and augment the details in order to control the quality of the methods and materials used for construction.

Modifying a standard plan sheet should be considered instead of making a new special detail sheet from scratch. In such cases, showing minimal alteration details in the contract and referring to one or more standard plans for the remaining information is permitted. However, it must be made explicitly clear what portions of the standard plans are, and are not, applicable to the special situation including any general notes.

Each detail shall be assigned an appropriate label. The locations where each detail applies shall be noted by station and offset.

Special details shall convey any conditions specific to the project or site that are necessary for the calculation of quantities and the determination of construction methods.

Only existing infrastructure or topography that is necessary to rationalize the proposed improvements or to indicate the removal of material should be shown.

The details must include any non-standard excavation and backfill requirements.

The details shall be fully dimensioned to provide the exact, or relative when appropriate, proportions needed to construct the feature. Views and details shall be appropriately labeled and related to other views and details.

Materials and work units shall be clearly defined with appropriate symbols and area patterning (stipple). Legends shall be provided to define area patterning (stipple) and symbols where appropriate.

General notes shall be used as necessary to control the general construction facets of the detailed feature. Notes may be placed with individual components of the detail where the note is specific to only that part of the special detail.

Charts may be used to assign conditional values to variables within the detail and to provide supporting information needed for construction.

Special Detail Particulars.

1) Sheet numbering for the Special Detail sheets shall begin with SD1. Multiple sheets shall be numbered SD1, SD2, SD3, etc.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-50-1(A) (D)	WASHOE (D)	SD1 (D)

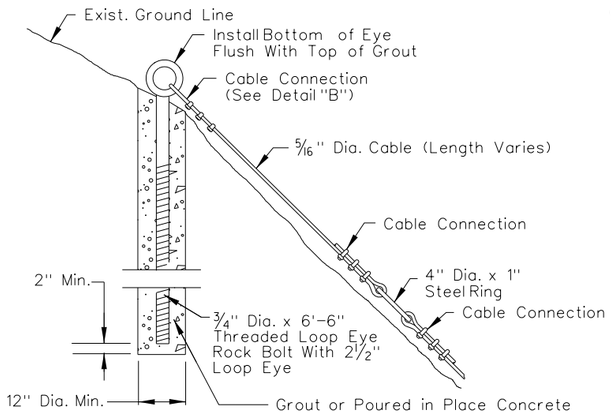
NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: ALL LINE WEIGHTS ARE WT=2 UNLESS OTHERWISE NOTED.

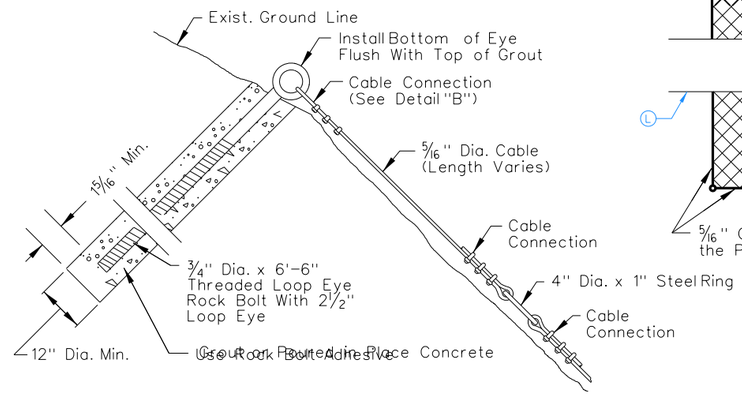
NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

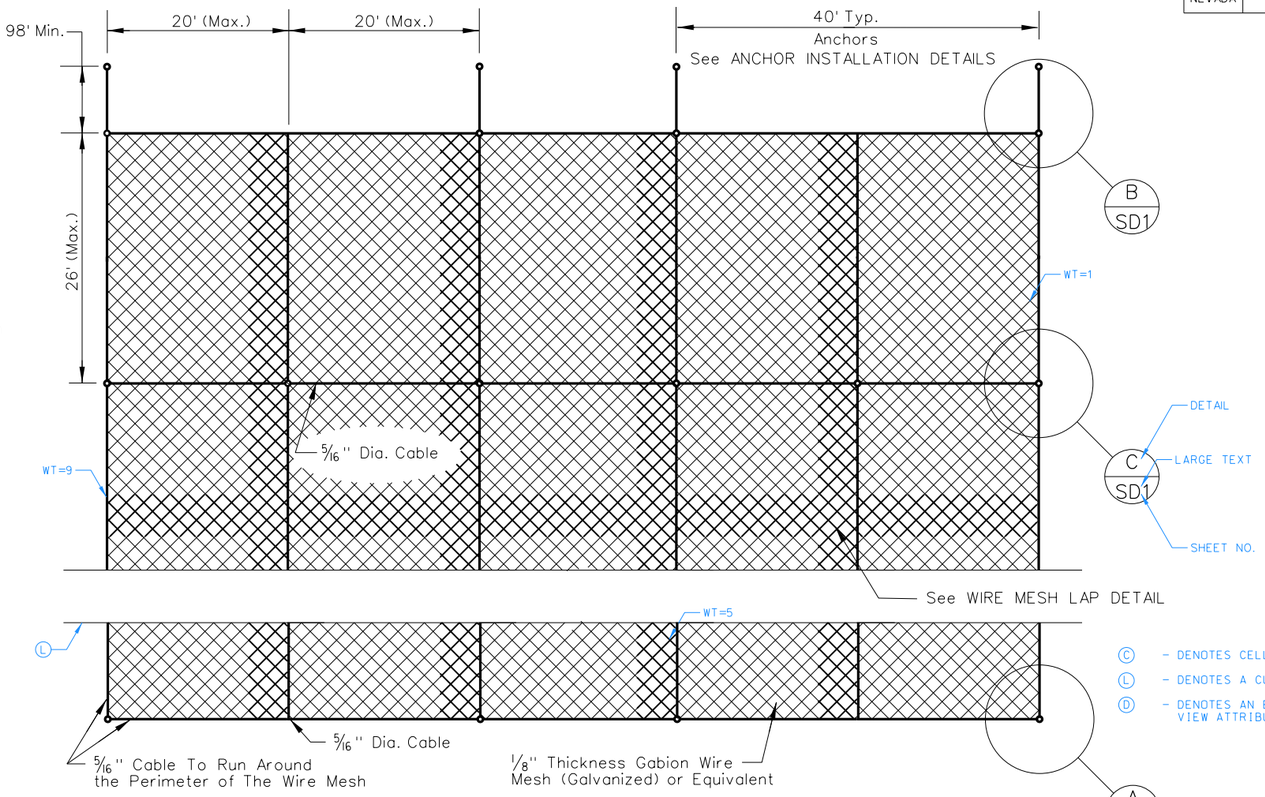
NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.



ANCHOR INSTALLATION IN SOIL (TOP) — LARGE TEXT



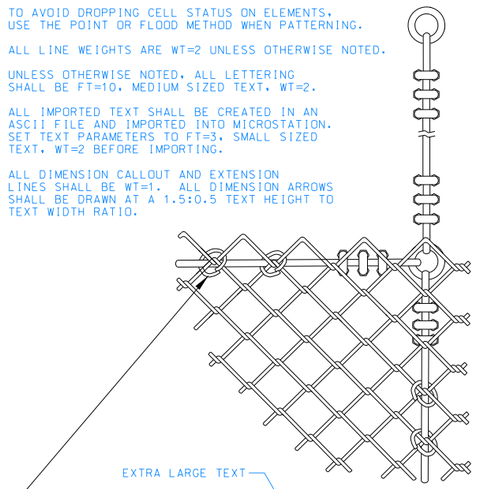
ANCHOR INSTALLATION IN ROCK (TOP)



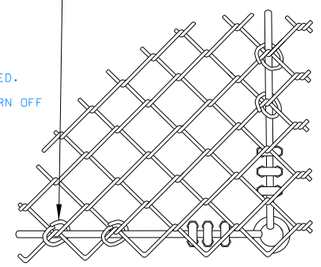
Ⓒ - DENOTES CELLS HAVE BEEN USED.

Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

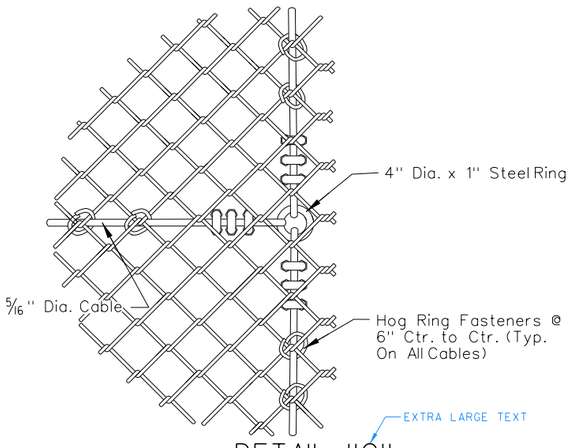
Ⓓ - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.



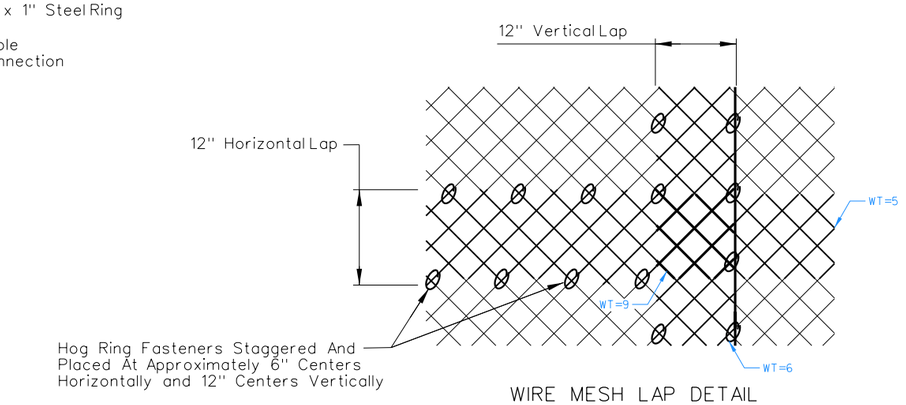
DETAIL "B"



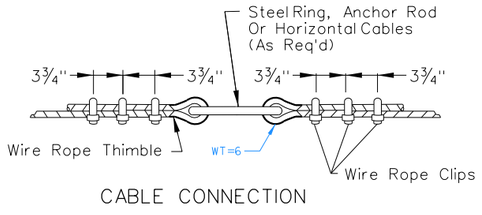
DETAIL "A"



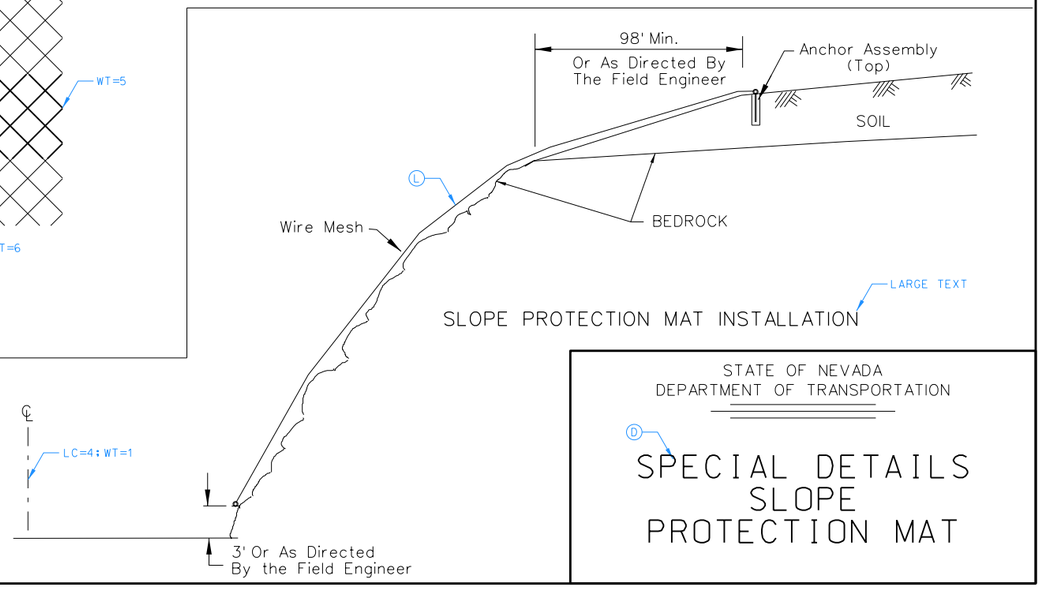
DETAIL "C"



WIRE MESH LAP DETAIL



CABLE CONNECTION

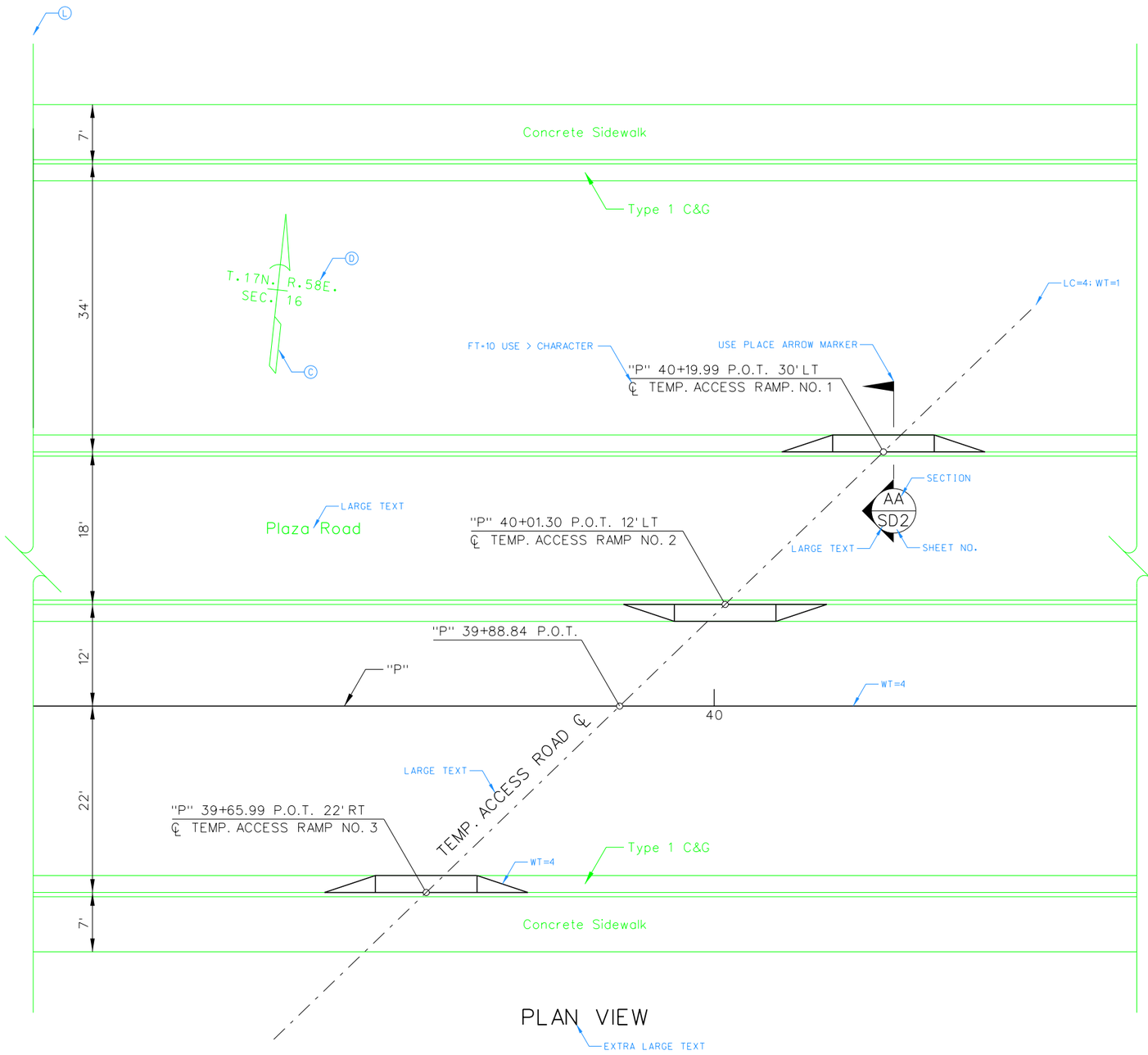


SLOPE PROTECTION MAT INSTALLATION

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

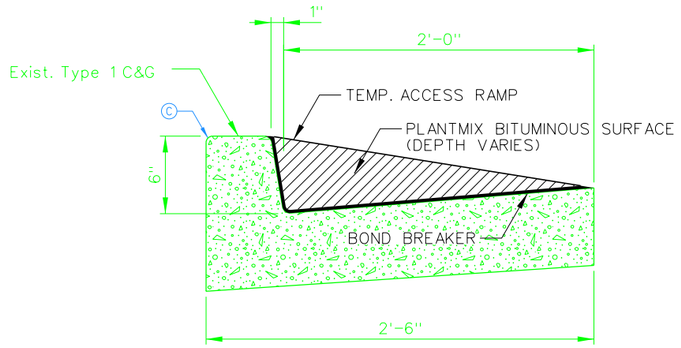
(D) SPECIAL DETAILS SLOPE PROTECTION MAT

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-30-1(A)	HUMBOLDT	SD2



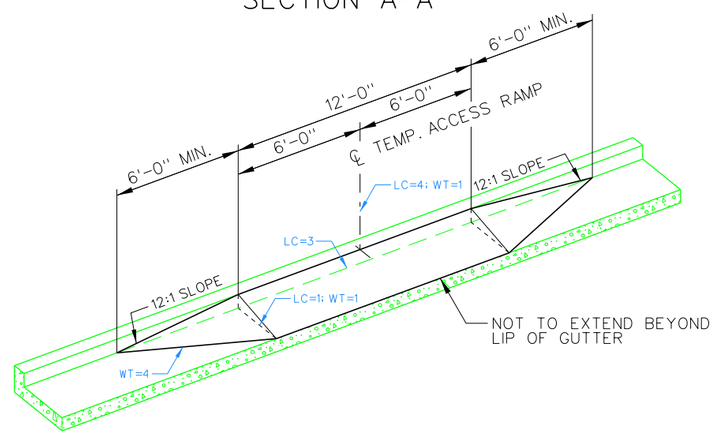
PLAN VIEW

EXTRA LARGE TEXT



SECTION A-A

EXTRA LARGE TEXT



TYPICAL ISOMETRIC DETAIL

EXTRA LARGE TEXT

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

NOTE: IF SPECIAL DETAILS DO NOT WARRANT USE OF A COMPLETE SHEET, SPECIAL DETAILS MAY BE COMBINED WITH TYPICAL SECTIONS.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAILS TEMPORARY ACCESS ROAD

(D)

11.0 Site Preparation Details.

General. Site preparation sheets show the work necessary to prepare the project for construction improvements. This work normally consists of clearing and grubbing, and the removal of structures and obstructions. In urban environments, site preparation sheets could be used to show cold milling areas around islands and auxiliary turn lanes to reduce the complexity of depicting this information on the typicals. The typicals should cross reference these sheets when this is implemented.

Site preparation sheets should only be included in the contract plans when this information would otherwise clutter the plan view sheets.

Site Preparation Guidelines. Site preparation sheets should contain distances, bearings, radiuses, and station/offsets of all longitudinal features and their lateral relationships adequately dimensioned. All features shall be dimensioned relative to the control line.

Show only existing infrastructure or topography that is needed to show relationship of the proposed improvements.

Site Preparation Particulars.

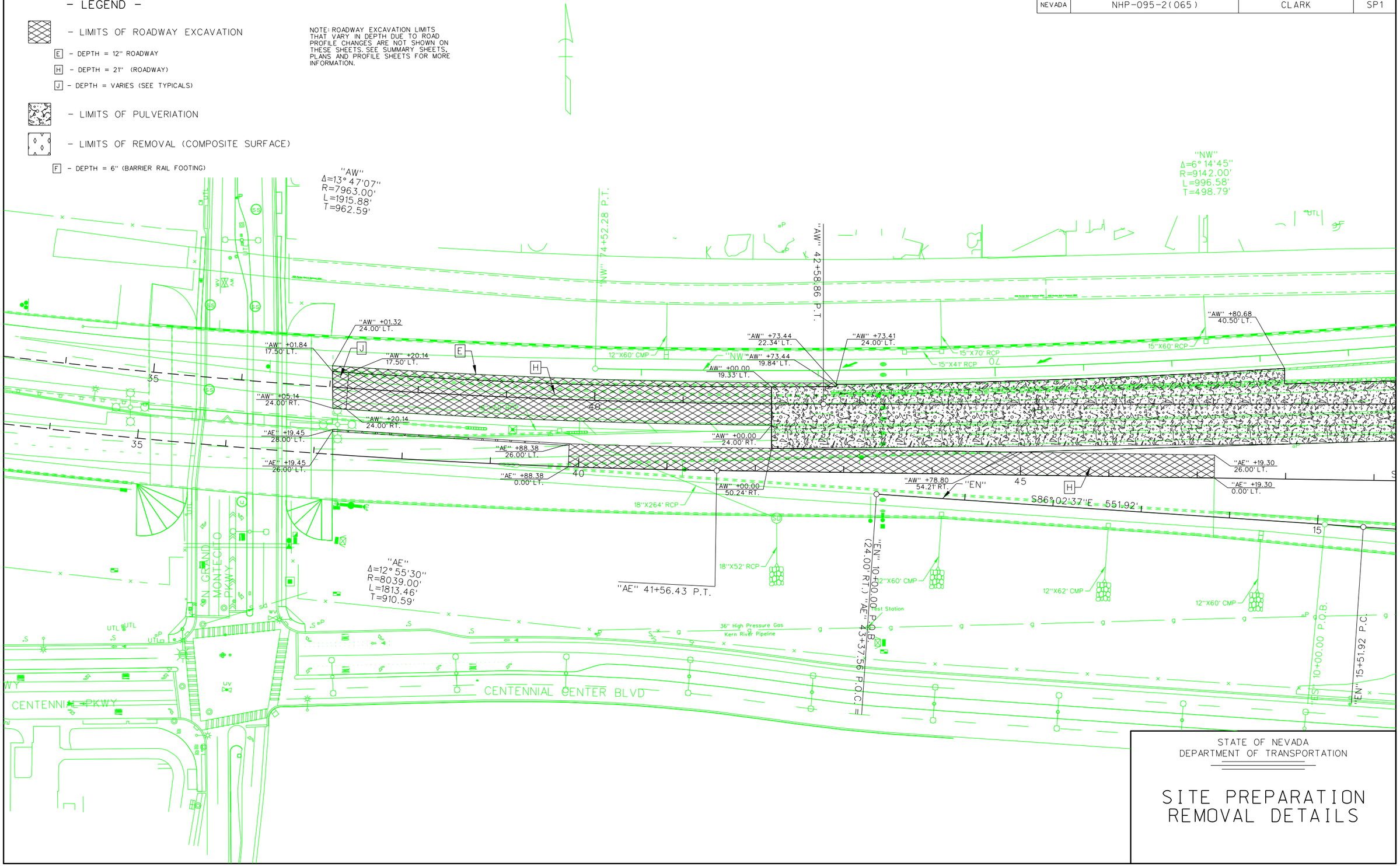
1) Sheet numbering for the site preparation sheets shall begin with SP1. Multiple sheets shall be numbered SP1, SP2, SP3, etc.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-095-2(065)	CLARK	SP1

- LEGEND -

- LIMITS OF ROADWAY EXCAVATION
  - [E] - DEPTH = 12" ROADWAY
  - [H] - DEPTH = 21" (ROADWAY)
  - [J] - DEPTH = VARIES (SEE TYPICALS)
- LIMITS OF PULVERIATION
- LIMITS OF REMOVAL (COMPOSITE SURFACE)
  - [F] - DEPTH = 6" (BARRIER RAIL FOOTING)

NOTE: ROADWAY EXCAVATION LIMITS THAT VARY IN DEPTH DUE TO ROAD PROFILE CHANGES ARE NOT SHOWN ON THESE SHEETS. SEE SUMMARY SHEETS, PLANS AND PROFILE SHEETS FOR MORE INFORMATION.



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SITE PREPARATION REMOVAL DETAILS

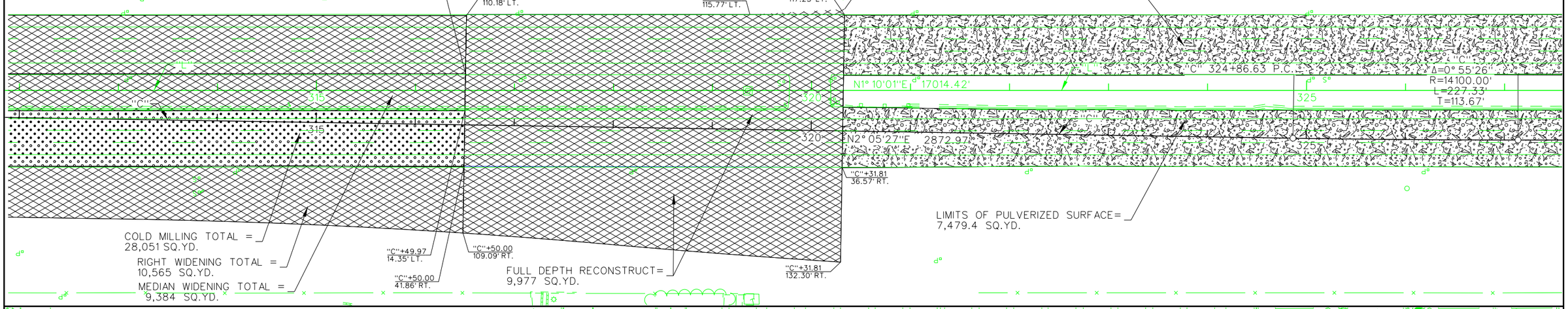
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	SP2

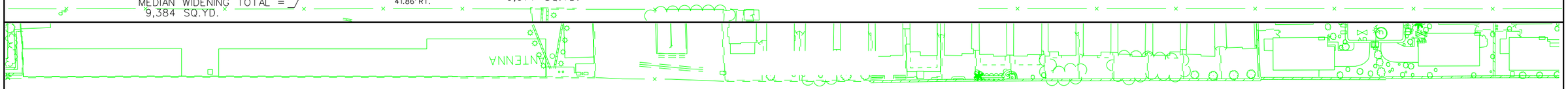
- LEGEND -

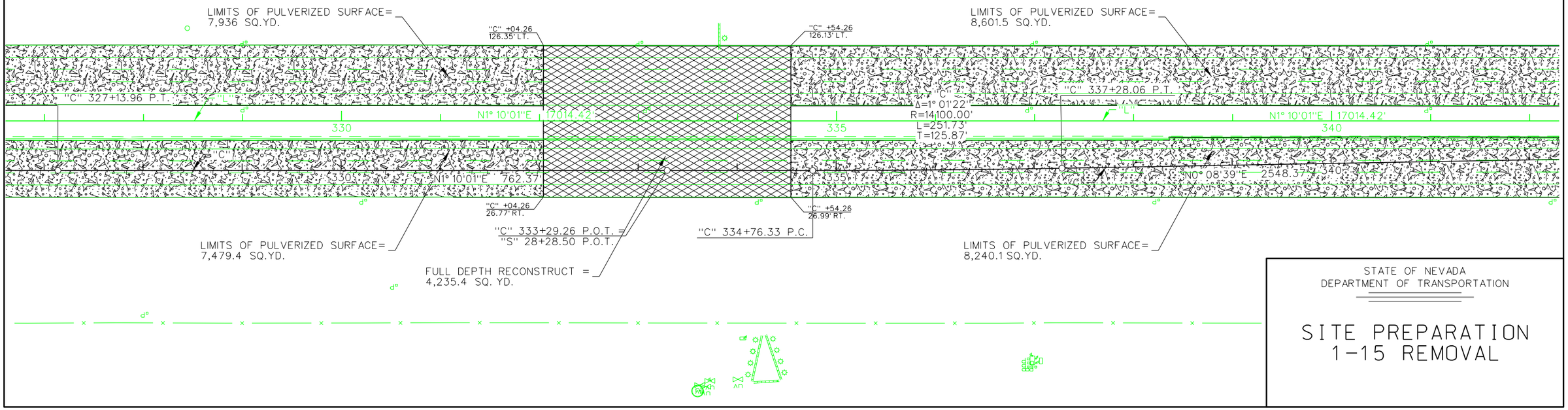
NOTE: IF REMOVAL DEPTHS ARE ADEQUATELY SHOWN IN TYPICALS, THEY DO NOT NEED TO BE SHOWN HERE

- LIMITS OF ROADWAY EXCAVATION
- LIMITS OF COLD MILLING
- LIMITS OF PULVERIZATION

T.23S. R.61E. SEC. 5







STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SITE PREPARATION 1-15 REMOVAL

12.0 Landscape and Aesthetics.

General. These plans show examples for location sheet, grading, layout, planting details, and quantities. Consult with the project manager for specific project requirements.

Landscape and Aesthetics Guidelines. The Landscape and Aesthetics (L&A) section prepares plans and structures list and assists in the development of special provisions. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans. For stand-alone L&A projects, Roadway Design will prepare and assist with the following:

- Cover sheet
- Location sketch
- Bid item summary report
- SUE coordination and potholing needs
- R/W utility coordination
- Traffic control
- Compile mapping files
- Clear zone recommendations

Landscape and Aesthetics Particulars.

1) Sheet Numbering. Begin sheet numbering with the designator L### for plan sheets and LD### for detail sheets. Begin plan sheets with L101. Continue with each plan type, L101, L201, L301, L401, LD101, LD201, LD301 etc. Keep sets in sequential order, including only relevant plan and detail sheets. For example, if there is no Site Demolition Sheet, make the Grading Plan L101.

L100	Landscape Location Sheet
L101	Site Demolition (Stand-alone projects only. Otherwise, coordinate landscape demolition items such as tree removals with Roadway Site Prep Plans.)
L201	Grading Plan
L301	Irrigation Plan
L401	Landscape Layout Plan
L501	Landscape Site Plan
L601	Planting Plan
LD101	Demolition Details
LD201	Grading Details
LD301	Irrigation Plans
LD401	Landscape Details
LD501	Planting Details
LS101	Landscape Structure List

2) Quantities. Call out quantities for decorative rock, seeding, grading and objects or features that span multiple sheets by shape (regardless of what sheet it is on). Summarize all quantities in a table.

3) Rocks and Boulders. Designate decorative rock type and decorative boulders by size from smallest to largest, with type A being smallest.

4) Plan sheet checklist:

- Verify that all required reference files are shown to help avoid conflicts with existing and proposed utilities, drainage, SLI or any other items of work that may exist in Landscape areas.
- Indicate clear zone with a black dashed line on all plan sheets. (Verify clear zone with Roadway Design.)
- Indicate Alignment with stations as a solid black line on all plan sheets.
- Right of Way indicated and labeled on all plan sheets.
- North arrow with township information

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPI-515-1(036)	CLARK	L100

L507 PLANTING PLAN SEEDING
L508 PAINTING PLAN

RUSSELL ROAD

T.21S R.62E

BEGIN PROJECT SPI-515-1(036)
"X" 621+85.95 P.O.T.

END PROJECT SPI-515-1(036)
"X" 648+73.54 P.O.T.

L202 SITE PLAN
L302 LAYOUT PLAN
L402 GRADING PLAN
L502 PLANTING PLAN

L204 SITE PLAN
L304 LAYOUT PLAN
L404 GRADING PLAN
L504 PLANTING PLAN

L201 SITE PLAN
L301 LAYOUT PLAN
L401 GRADING PLAN
L501 PLANTING PLAN

R/W
EOP
I-515
"X"
SEC. 33
SEC. 34
SEC. 28
IR 515-CL 65.12
I-1456

L203 SITE PLAN
L303 LAYOUT PLAN
L403 GRADING PLAN
L503 PLANTING PLAN

L205 SITE PLAN
L305 LAYOUT PLAN
L405 GRADING PLAN
L505 PLANTING PLAN

L206 SITE PLAN
L306 LAYOUT PLAN
L406 GRADING PLAN
L506 PLANTING PLAN

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

NDOT I-515 & RUSSELL ROAD
PROJECT

OVERALL SHEET LAYOUT

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-0341(023)	WASHOE	L101

APN 143-040-14

APN 143-040-09

APN 143-040-1

E WHITES CREEK LN

GEIGER GRADE RD

SR 341

VETERANS PKWY

VETERAN'S PKWY

T.18N., R.20E.
SEC. 28

REMOVE PLANTS & WEEDS

RIVER ROCK TO REMAIN

REMOVAL OF COMPOSITE SURFACE, REMOVE GRAVEL BAND

PROTECT EXISTING TREE

RIVER ROCK TO REMAIN

REMOVE PLANTS & WEEDS IN ISLAND

RIVER ROCK TO REMAIN ADJUST EXISTING LAYOUT TO MATCH PROPOSED

REMOVE PLANTS

PROTECT EXISTING TREE

REMOVE PLANTS & WEEDS

RIVER ROCK TO REMAIN

"B"

REMOVE PLANTS & WEEDS IN ISLAND

REMOVE PLANTS & WEEDS IN THIS ISLAND

REMOVAL OF COMPOSITE SURFACE, REMOVE GRAVEL BAND

PROTECT TREE IN PLACE

GRASSES TO REMAIN ROUNDABOUT, TYPICAL

REMOVAL OF COMPOSITE SURFACE, REMOVE GRAVEL BAND

PROTECT TREE IN PLACE

RIVER ROCK TO REMAIN

BOULDERS TO REMAIN

RIVER ROCK TO REMAIN

REMOVE PLANTS

"A"

DRAINAGE CENTERLINE

REMOVE PLANTS & WEEDS IN ISLAND

PROTECT EXISTING TREE

RETAIN NATIVE GRASSES/PLANTS IN ISLAND, REMOVE WEEDS TYPICAL

PROTECT EXISTING TREE

PROTECT EXISTING TREE

PROTECT EXISTING NATIVE VEGETATION ALONG DRAINAGE, REMOVE WEEDS

PROTECT EXISTING TREE

LANDSCAPE LEGEND

	DELINEATION OF EXISTING ROCK AREA TO REMAIN
	REMOVAL OF COMPOSITE SURFACE, EXISTING GRAVEL
	EXISTING BOULDERS TO REMAIN

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SR341 / VETERANS PARKWAY ROUNDABOUT SITE DEMO

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-050-2(016)	LYON	L201

T.18N. R.24 E. SEC. 19

missing shot on MH

E.O.P.

8" Sewer

TW 4205.0
BW 4202.0

TW 4207.0
BW 4204.0

TW 4208.5
BW 4205.0

TW 4213
BW 4210

LANDSCAPE MOUND
+1388.33 CUYD

HP 4210.5
+189.70 CUYD

HP 4210.0
BW 4204.5

TW 4203
BW 4200

LANDSCAPE MOUND
+1184.28 CUYD

TW 4201.0
BW 4198.0

TW 4199
BW 4206

BW 4200.5
TW 4203.0

HIGH POINT
4204.0

LANDSCAPE MOUND
+1275.61 CUYD

2" Gas

"GF"

"W"

"E"

"S"

4200'

PAVED SWALE

LANDSCAPE LEGEND

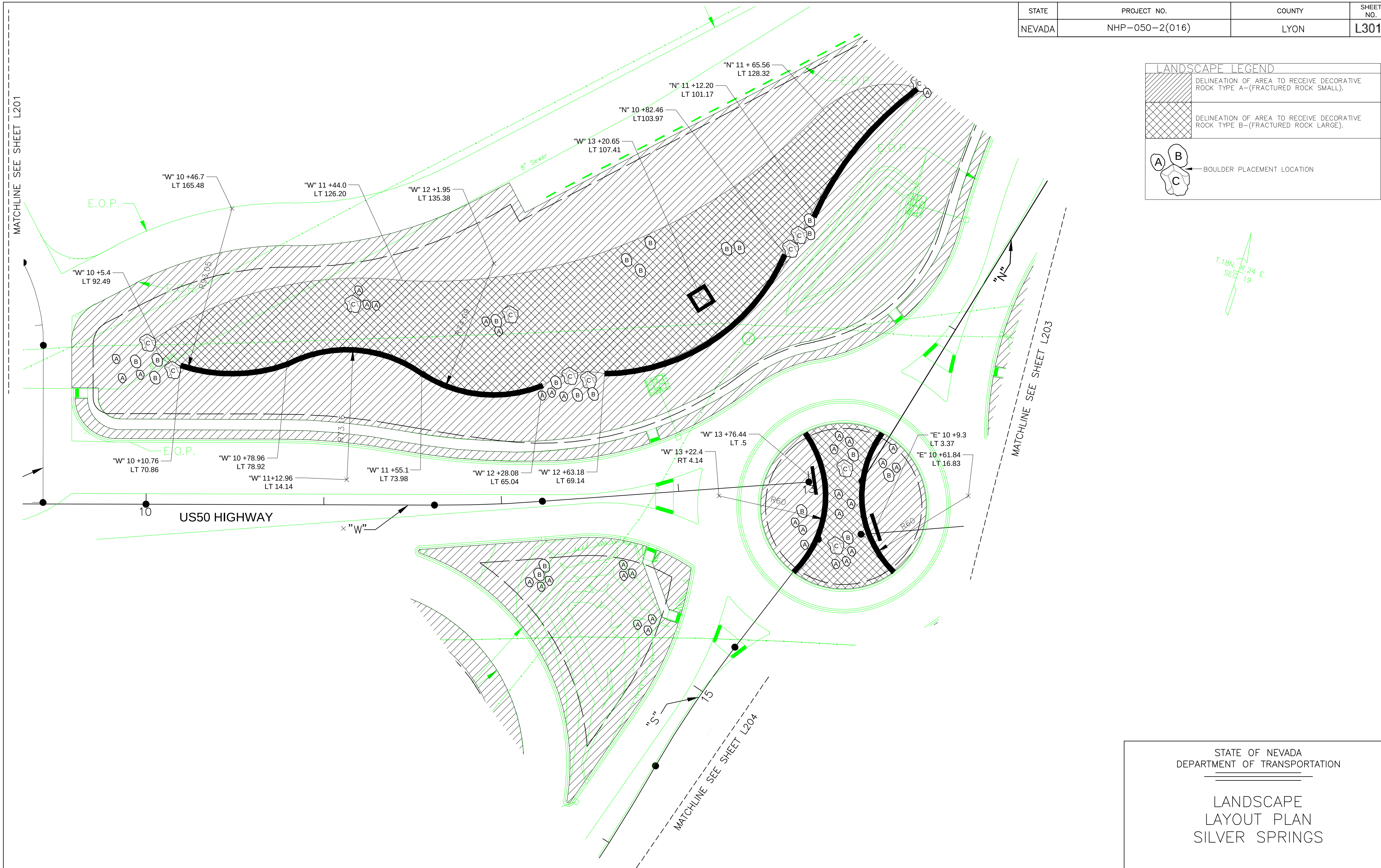
	LANDSCAPE ROCK WALL
A B C	BOULDER PLACEMENT LOCATION

FILL QUANTITIES

(1)	4038.4 CUYD	FILL

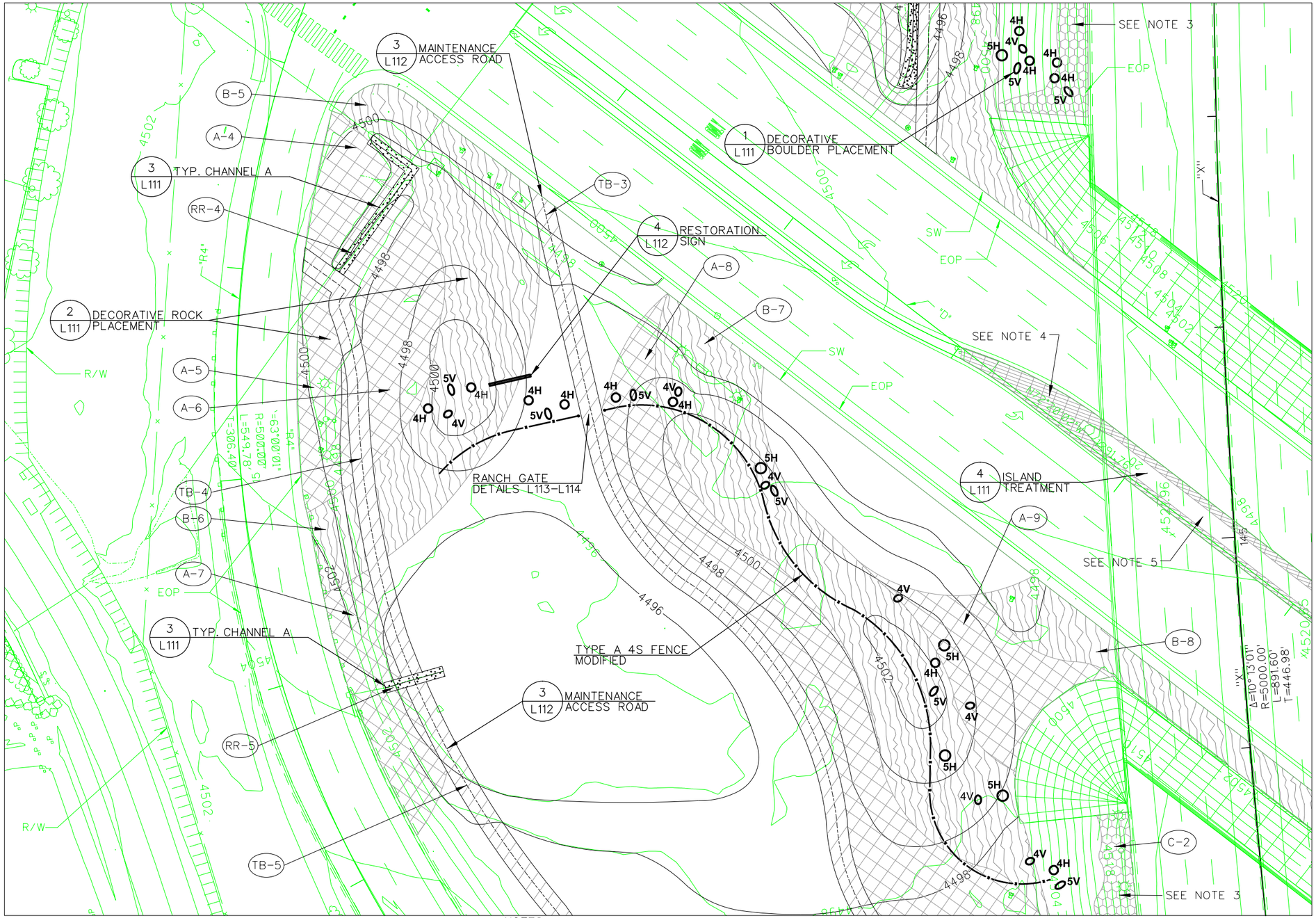
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LANDSCAPE GRADING SILVER SPRINGS


STATE
PROJECT NO.
COUNTY
SHEET NO.
NEVADA
NHP-050-2(016)
LYON
L301
LANDSCAPE LEGEND
DELINEATION OF AREA TO RECEIVE DECORATIVE ROCK TYPE A-(FRACTURED ROCK SMALL).
DELINEATION OF AREA TO RECEIVE DECORATIVE ROCK TYPE B-(FRACTURED ROCK LARGE).
BOULDER PLACEMENT LOCATION
MATCHLINE SEE SHEET L201
MATCHLINE SEE SHEET L203
MATCHLINE SEE SHEET L204
"N" 11 + 65.56 LT 128.32
"N" 11 +12.20 LT 101.17
"N" 10 +82.46 LT103.97
"W" 13 +20.65 LT 107.41
"W" 10 +46.7 LT 165.48
"W" 11 +44.0 LT 126.20
"W" 12 +1.95 LT 135.38
"W" 10 +5.4 LT 92.49
"W" 10 +10.76 LT 70.86
"W" 10 +78.96 LT 78.92
"W" 11+12.96 LT 14.14
"W" 11 +55.1 LT 73.98
"W" 12 +28.08 LT 65.04
"W" 12 +63.18 LT 69.14
"W" 13 +76.44 LT .5
"W" 13 +22.4 RT 4.14
"E" 10 +9.3 LT 3.37
"E" 10 +61.84 LT 16.83
E.O.P.
8" Sewer
US50 HIGHWAY
"W"
"N"
"S"
10
15
R60
T.18N. R.24 E. SEC. 19
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
LANDSCAPE
LAYOUT PLAN
SILVER SPRINGS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPI-580-1(026)	WASHOE	L401

MATCHLINE SEE SHEET L103



MATCHLINE SEE SHEET L107

T. 18N. R. 20E. SEC. 08

SEE L110 FOR ROCK QUANTITY TABLE. QUANTITY BY SHAPE, TYP

SITE PLAN LEGEND

SYMBOL	DESCRIPTION
	DECORATIVE ROCK TYPE "A"
	DECORATIVE ROCK TYPE "B"
	DECORATIVE ROCK TYPE "C"
	RIPRAP CLASS 150
	TYPE 1, CLASS 'B' AGGREGATE
	CLASS AA ISLAND PAVING 21.33 CU. YD.
— x —	TYPE A 4S FENCE MODIFIED 421 LF
	DECORATIVE BOULDERS TYPE "A" 20 EA.
4V	4' DIA. SET VERTICAL
4H	4' DIA. SET HORIZONTAL
	DECORATIVE BOULDERS TYPE "B" 13 EA.
5V	5' DIA. SET VERTICAL
5H	5' DIA. SET HORIZONTAL
	DESIGN CONTOUR

NOTES:
1. ALL EXISTING UNDERGROUND PIPES, UTILITY LINES AND EQUIPMENT SHOWN ON PLANS ARE DIAGRAMMATIC AND SHALL BE FIELD VERIFIED BY POTHOLING AND USING LOCATOR TO AVOID CONFLICTS. ALL UTILITIES, PIPES AND EQUIPMENT ARE TO REMAIN AND BE PROTECTED IN PLACE.
2. SIZE OF DECORATIVE BOULDERS MAY BE ADJUSTED. CONTRACTOR TO STAKE CORNERS FOR OBSERVATION BY ENGINEER/LANDSCAPE ARCHITECT.
3. REMOVE DEAD VEGETATION AND PROTECT EXISTING LIVE VEGETATION. PLACE DECORATIVE ROCK BETWEEN EXISTING PLANTS.
4. REMOVAL OF COMPOSITE SURFACE FULL WIDTH, DISPOSE.
5. RETAIN AND PROTECT EXISTING BARRIER.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

I-580 SOUTH MEADOWS PARKWAY INTERCHANGE PROJECT

LANDSCAPE SITE PLAN

C:\Users\aaraya\Documents\CAD\180101399\drawing-SM\DGN\L105.dgn

ROCK QUANTITY TABLE			
SHAPE	SF	TONS	
A-1	5,189	55	
A-2	4,357	46	
A-3	2,734	29	
A-4	1,845	20	
A-5	2,223	24	
A-6	3,689	39	
A-7	2,879	31	
A-8	12,942	138	
A-9	3,499	37	
A-10	6,697	71	
A-11	11,507	123	
A-12	4,017	43	
A-13	5,655	60	
A-14	5,669	60	
A TOTAL	72,902	776	
			30% 2"-6"
B-1	11,038	118	47
B-2	5,610	60	24
B-3	1,585	17	7
B-4	1,710	18	7
B-5	9,291	99	40
B-6	949	10	4
B-7	12,214	130	52
B-8	7,991	85	34
B-9	20,591	219	88
B-10	11,911	127	51
B-11	1,887	20	8
B-12	3,245	35	14
B-13	7,469	80	32
B TOTAL	95,485	1,017	407
C-1	14,347	153	
C-2	12,671	135	
C-3	5,850	62	
C TOTAL	32,868	350	

ROCK QUANTITY TABLE		
SHAPE	SF	CY
RR-1	1,708	63
RR-2	50	2
RR-3	149	6
RR-4	422	16
RR-5	145	5
RR-6	123	5
RR-7	53	2
RR-8	492	18
RR-9	50	2
RR TOTAL	3,192	118
TB-1	3,505	64.91
TB-2	3,038	56.26
TB-3	817	15.13
TB-4	6,167	114.20
TB-5	2,125	39.35
TB-6	2,879	53.31
TB-7	5,618	104.04
TB-8	972	18.00
TB-9	3,850	71.30
TB-10	572	10.59
TB TOTAL	29,543	547.09

NOTES:

1. A IS DECORATIVE ROCK A
2. B IS DECORATIVE ROCK B
3. C IS DECORATIVE ROCK C
4. RR IS CLASS 150 RIPRAP
5. TB IS TYPE I, CLASS B AGGREGATE BASE
6. 4CY RR WAS ADDED TO TOTAL FOR L103 CULVERT ENDS - TOTAL 119CY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

I-580 SOUTH MEADOWS PARKWAY
INTERCHANGE PROJECT

ROCK QUANTITY TABLE

C:\Users\aarayd\Documents\CAD\80101399\drawing-SM\DGN\L110.dgn

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-395-1(027)	CARSON CITY	L501

IRRIGATION SYMBOLS
(FOR SHEETS IR1 TO IR3 ONLY)

E.M. — ELECTRICAL IRRIGATION SERVICE (REFER TO UTILITY PLANS)

W.V. — IRRIGATION WATER STUB (REFER TO UTILITY PLANS)

I S — IRRIGATION ASSEMBLY

PB — CONCRETE VALVE BOX- IRRIGATION SUPPLY WIRE PULL BOX

IC — IRRIGATION CONTROLLER

TWO-PIECE QUICK-COUPLER VALVE

MV — MASTER VALVE (1 1/2 INCH ELECTRIC CONTROL VALVE) NORMALLY OPEN

FS — FLOW SENSOR

DRIP VALVE ASSEMBLY

GV — GATE VALVE ASSEMBLY

EP — FLUSH VALVE ASSEMBLY

2A — ZONE NUMBER
1" — VALVE SIZE
4 — GALLONS PER MINUTE

3 INCH POLYVINYL CHLORIDE PIPE - IRRIGATION MAINLINE
2 INCH POLYETHYLENE PIPE (UNDER ROAD CROSSINGS)

3/4 INCH POLYETHYLENE PIPE - DRIP TUBE

1 INCH PVC DRIP HARD PIPE

PVC HARD PIPE SLEEVE

IRRIGATION WIRE

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

IRRIGATION PLAN

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-395-1(027)	CARSON CITY	L502

SEE SHEET L3

E.O.P.

"CS"+98.57
74.00' LT. (EOP)

"S1"+94.58
49.00' LT. (EOP)

"S1"+93.59
85.00' RT. (EOP)

"CS"+98.57
74.00' LT. (EOP)

"CS"+07.95
82.00' RT. (EOP)

"R3"+89.99
81.00' LT. (EOP)

"R3"+09.27
81.00' LT. (EOP)

"R3"+96.81
89.00' RT. (EOP)

"CS"+37.05
82.00' RT. (EOP)

"CS"+70.04
82.00' LT. (EOP)

"CS"+50.75
82.94' RT. (EOP)

"CS"+53.55
82.00' RT. (EOP)

"R3"+69.99
81.00' LT. (EOP)

L502

8A
1"
10

6A
1"
12

7A
1"
9

4763.92

4760'

4770'

4750'

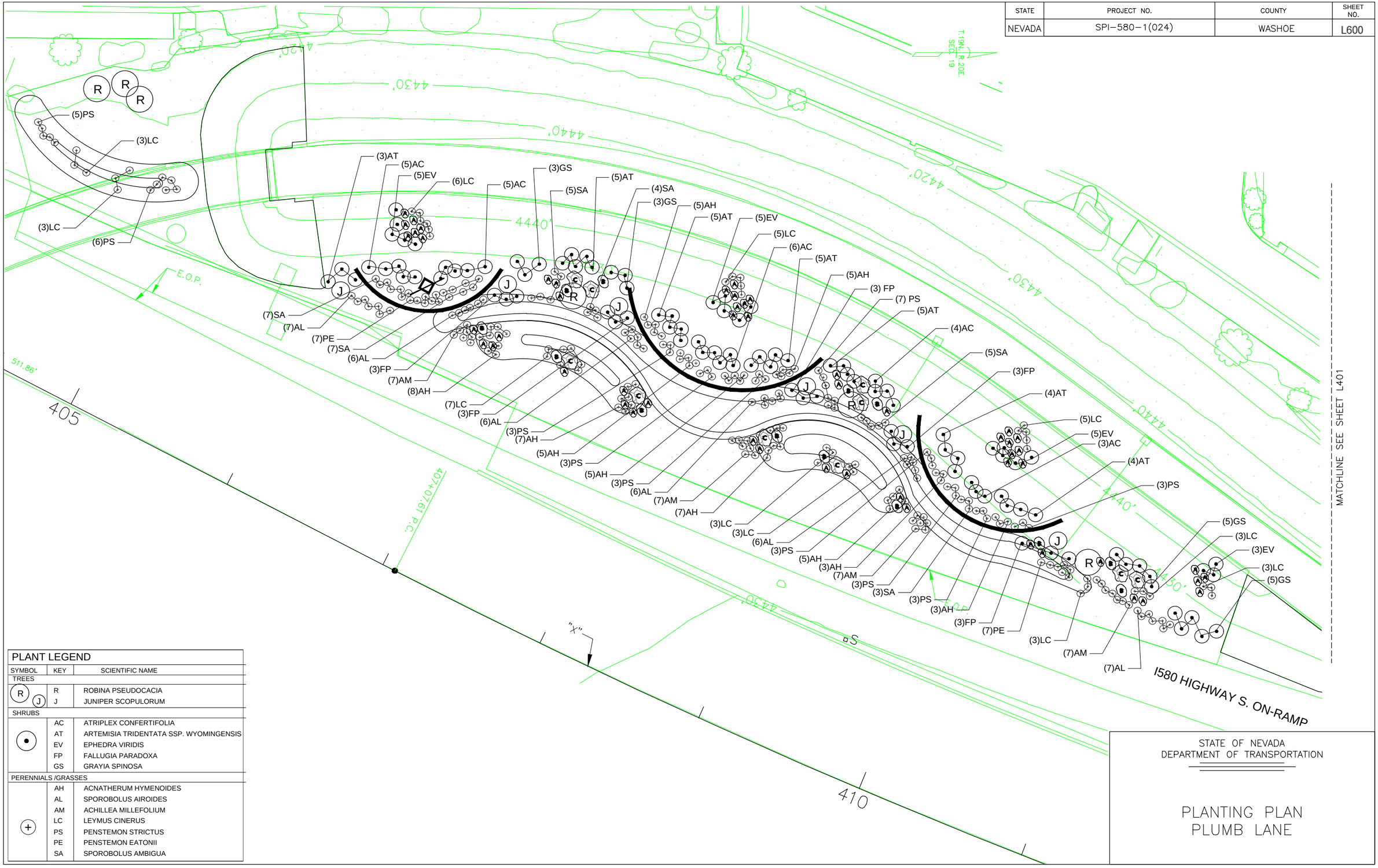
4730'

4740'

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

IRRIGATION PLAN

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPI-580-1(024)	WASHOE	L600



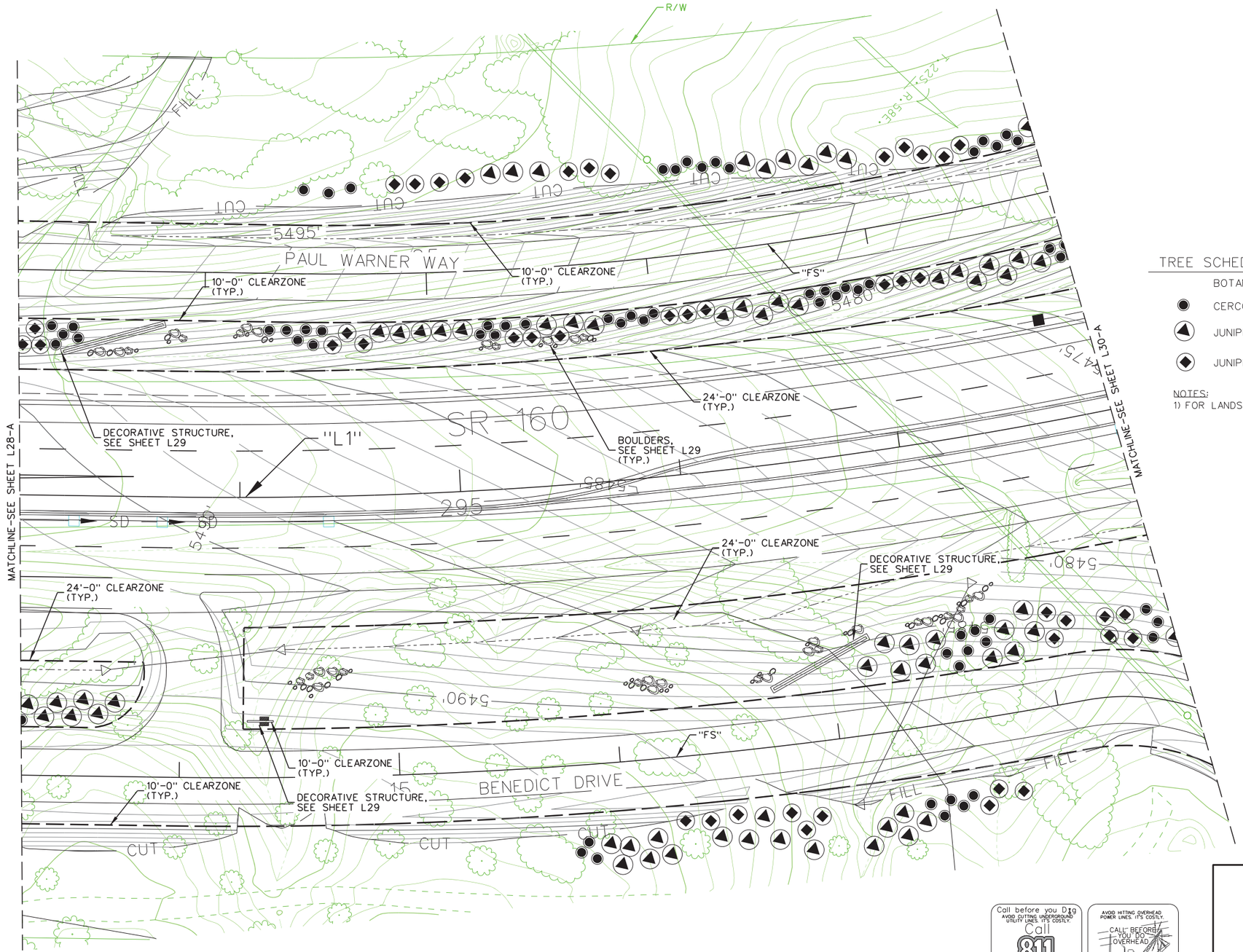
PLANT LEGEND

SYMBOL	KEY	SCIENTIFIC NAME
TREES		
R	R	ROBINA PSEUDOCACIA
J	J	JUNIPER SCOPULORUM
SHRUBS		
⊙	AC	ATRIPLEX CONFERTIFOLIA
	AT	ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS
	EV	EPHEDRA VIRIDIS
	FP	FALLUGIA PARADOXA
	GS	GRAYIA SPINOSA
PERENNIALS /GRASSES		
+	AH	ACNATHERUM HYMENOIDES
	AL	SPOROBOLUS AIROIDES
	AM	ACHILLEA MILLEFOLIUM
	LC	LEYMUS CINERUS
	PS	PENSTEMON STRICTUS
	PE	PENSTEMON EATONII
	SA	SPOROBOLUS AMBIGUA

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

PLANTING PLAN
PLUMB LANE

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-160-1(028)	CLARK	L609



AREA ENLARGEMENT 'F' - PLANTING
SCALE: 1" = 50'

TREE SCHEDULE (PLANTS GROUP A)

	BOTANICAL NAME:	COMMON NAME:	QUANTITY:	SIZE:
◉	CERCOCARPUS LEDIFOLIUS	CURL-LEAF MOUNTAIN MAHOGANY	62	DEEPOT
◭	JUNIPERUS SCOPULORUM	ROCKY MOUNTAIN JUNIPER	64	DEEPOT
◆	JUNIPERUS OSTEOSPERMA	UTAH JUNIPER	43	DEEPOT

NOTES:
1) FOR LANDSCAPE ENLARGEMENT, SEE SHEET L29

Call before you Dig
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call 811 OR 1-800-227-2600

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SR 160 - PHASE 2

PLANTING ENLARGEMENT

1:50 PLOT SCALE

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPI-580-1(024)	WASHOE	LS101

LANDSCAPE STRUCTURE LIST

DESCRIPTION	STATION TO STATION	DECORATIVE FIGURE (TYPE A) 212 0942 EACH	DECORATIVE ROCK (TYPE C) 212 0890 TON	DECORATIVE ROCK (TYPE B) 212 0880 TON	DECORATIVE ROCK (TYPE A) 212 0870 TON	DECORATIVE BOULDER (TYPE C) 212 0840 EACH	DECORATIVE BOULDER (TYPE B) 212 0830 EACH	DECORATIVE BOULDER (TYPE A) 212 0820 EACH	ROCK WALL 212 0800 SQFT	PLANTS (GROUP B-1) 212 0480 EACH	PLANTS (GROUP A-5) 212 0430 EACH	PLANTS (GROUP A-1) 212 0410 EACH	PLANT ESTABLISHMENT WORK 212 0390 LS	TOPSOIL 212 0180 CUYD	DETAIL PAINTING 212 0050 SQFT	PAINTING 212 0045 SQYD	SEEDING 211 0150 ACRE	TYPE 2 DRAIN BACKFILL 209 0130 CUYD	BORROW EMBANKMENT 203 0230 CUYD	ROADWAY EXCAVATION 203 0140 CUYD	REMOVAL OF COMPOSITE SURFACE 202 0935 CUYD	CLEARING AND GRUBBING 201 0100 LS
NOTE: ALL LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER																						
Demolition	L100-L102																					1
Remove Millings	L300																				231.9	
Grading Mounds and Swales	L301																		1111	557		
Construct Rock Wall '2'	L202								500													
Construct Rock Wall '6'	L202								725													
Construct Rock Wall '11'	L202								620													
Place Decorative Rock	L100-L102		821	164	444																	
Conduct Plant Establishment	L400-L401												1									
Place Decorative Boulder	L201-L202					10	13	56														
Install Planting	L400-L401									23	85	265										
Install Seeding	L500																1.6					
Install Decorative Figure	SD7-SD8	1																				
Place Topsoil	L500													105								
Detail Slope Painting	SD4-SD10														2527							
Slope Painting	L103															1177						
Install In Graded Swale	L101																	274.0				
Final Grading As Directed By Engineer	L101-L500																					
Total		1	821	164	444	10	13	56	1845	23	85	265	LS	105	2527	1177	1.6	274.0	1111	557	231.9	LS

13.0 Drainage Sheets.

General.

All Drainage Sheets are to show location and special construction information for drainage facilities. They are the drainage plans, profiles, special details, temporary erosion control plans, and structure lists. In some cases, the proposed work is minimal and the drainage elements can be shown on Roadway Sheets without the need of Drainage Sheets or Drainage Structure Lists. All Drainage Sheets are to be done by the Hydraulics Division and shall be complete, clear, concise, and as easy to read and understand as possible. Information must be presented in a manner such that bidding on, and construction of, all drainage improvements is facilitated to the fullest extent practicable.

Subsurface drainage, such as underdrains, horizontal drains, edge drains, and subgrade drains, is typically supplied by other divisions but may be shown on the Drainage Plan Sheets.

Hydraulic Plan Guidelines.

Use applicable standards from this Plan Preparation Guide for the development of Hydraulic Plans.

Hydraulic Plan Particulars.

1) Sheet numbering for Hydraulic Plans shall be numbered using the following:

D1 Drainage plans
DP1 Drainage profiles
DD1 Drainage details
Including but not limited to:
- Special grading such as for detention basins
- Conceptual river diversion sheets
- Temporary alignment callouts
- Special ditch and channel layouts
- Concrete structure details

DS1 Drainage structure lists
TPC1 Temporary pollution control (this is an uncommon sheet)

2) Submittal Requirements for Drainage Plan Sheets is typically as shown in the following tables. Drainage design elements progressed through the various design phases include, but are not limited to: storm drain systems, channels, ditches, permanent erosion and sediment control features, water quality features, energy dissipators, culverts, detention and retention basins, etc.

Conceptual Plan Submittal *(30% Submittal)*	
Item Description	**Notes**
Drainage Plan View	Conceptual sketches of on-site system as necessary. Schematic locations and sizes of channels, culverts, bridges, and permanent erosion and sediment control features, etc., with general labeling (no construction notes, elevations or sheet references). Show existing right-of-way limits (if available). Identify proposed conceptual drainage right-of-way needs.
Drainage Profile View	Conceptual drawings, typically for major channel profiles and major cross-drainage features. On-site profiles typically not required.
Special Details	Typically not require.
Structure List	Typically not require.

Intermediate Plan Submittal *(60% Submittal)*	
Item Description	**Notes**
Drainage Plan View	Substantially complete layout of on-site and off-site systems (Complete construction notes, refer to Appendix C). Final drainage easements and right-of-way.
Drainage Profile View	Substantially complete profiles of all on and off-site systems, (draft all features including existing and proposed ground profiles, labels, symbols for manholes drop inlets, headwalls, end sections, transitions, riprap, all utilities, etc.)
Special Details	Major dimensions and features shown.
Structure List	Preliminary structure list.

QA/QC Plan Submittal *(90% Submittal)*	
Item Description	**Notes**
Drainage Plan View	Complete layout of on-site and off-site systems
Drainage Profile View	Complete profiles.
Special Details	Complete details.
Structure List	Complete.

Note:
All hydraulic elements are to be drawn into a separate HYD001 DGN and referenced into the plan sheets. Construction notes and callouts are to be added to this sheet.

Typically, plans are done at a scale of 1" = 100'. In urban areas where more detail is necessary, 1" = 80' may be used.

Attempt to match the sheet layout location to the Roadway Sheets. However, in some cases this is not practical and judgement should be used.

It is optional whether to show the proposed striping on the drainage sheets.

Proposed contours are to be displayed in their own DGN and referenced to this sheet.

Existing contours are to be displayed in their own DGN and referenced to this sheet.

If no drainage work is proposed on a sheet, but the sheet is still included in the set, put the following words on the sheet: NO HYDRAULIC WORK THIS SHEET

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	D1

NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. USE CAUTION, PROTECT ALL UTILITIES IN PLACE.

Show Inside and Outside of RCB Structures

SEE SHEET D18

Storm Drains that Deviate Greatly from Alignments May Consider their Own Alignments

SEE SHEET D7

Riprap Pattern Transparency = 40%

All Proposed Utilities To Be Displayed In Blue Line WT = 1

* CONTRACTOR TO FIELD VERIFY ALL EXISTING STORM DRAIN FEATURES AND PROTECT IN PLACE.

Prop. Contours Color = Black Line WT = 1 Transparency = 50% Use Interval of 2' but 1' Can Be Used

North Arrow

All Existing Utilities To Be Displayed In Cyan Line WT = 1

Exist. Planimetrics (Mapping) Line WT = 0

Exist. Contours Color = Green Line WT = 0 Transparency = 50% Use Interval of 2' but 1' Can Be Used

Add Callouts of Existing Facility Sizes

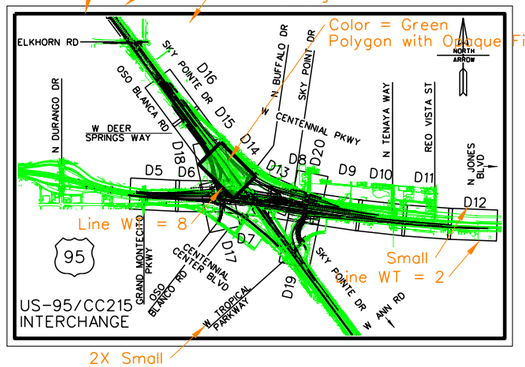
Reference in the Proposed and Existing Alignments Line WT = 1

Display Roadway Plan DGNs Line WT = Per Default or 0

Line WT = 8

Line WT = 1

Legend is Optional Reference in from Separate DGN Use Nesting with Planimetrics and Roadway Layout Referenced into The Legend



Color = Green Polygon with Opaque Fill

Line WT = 8

Small Line WT = 2

2X Small

All Headwalls, Pipe or RCB To Be Drawn In To Scale

Draw Concrete Apron to Scale Outside of DI Cell

Reference In HYD001 DGN Keeping Standard Line Types and Weights

Draw Trench Drain to Scale

Reference In Roadway Plan DGN Line WT = 0

Riprap Cell for Standard Riprap Apron (Place at Edge of Headall or End of End Section)

End Section Cell (Place at End of Pipe)

Drop Inlet and Embankment Protector Cell (Place at center of DI)

Reference In ROW DGN Line WT = 0

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	D1A

NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. USE CAUTION, PROTECT ALL UTILITIES IN PLACE.

Add an "A", "B", "C" etc. to the Sheet Number as Needed

Text Size = Medium
Line WT = 2

1	"WN" 45+18 "WN" 44+72	CONSTRUCT 6' X 3' X 86' RCB FROM "WN" 45+18, 33.7' LT (UIE = 2437.17') TO "WN" 44+72, 38.8' RT (LIE = 2435.43'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. CONSTRUCT CLASS CLASS 300 RIPRAP APRON AT INLET AND OUTLET. (SEE SHEET DP25)
2	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
3	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
4	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
5	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
6	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
7	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
8	"WN" 45+18 "WN" 44+72	CONSTRUCT 6' X 3' X 86' RCB FROM "WN" 45+18, 33.7' LT (UIE = 2437.17') TO "WN" 44+72, 38.8' RT (LIE = 2435.43'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. CONSTRUCT CLASS CLASS 300 RIPRAP APRON AT INLET AND OUTLET. (SEE SHEET DP25)
9	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
10	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
11	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
12	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
13	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)
14	"WN" 45+31	CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 19.5' RT (GRATE ELEV. = 2444.09', H = 2.00'). INSTALL 15" HDPE DOWNDRAIN TO "WN" 45+31, 31.5' RT (LIE = 2439.70'). (SEE SHEET DP5)

Note: This sheet is an overflow sheet when notes will not fit on the main sheet. Sometimes details or a profile can be placed on this sheet to avoid the need for a detail/profile sheet.

Scale of this sheet to match the primary sheet.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHFP-015-2(047)	CLARK	50

PRELIMINARY
SUBJECT TO REVISION
2/1/2021 6:17:15 AM

T.13 S., R.69 E. Sec. 29

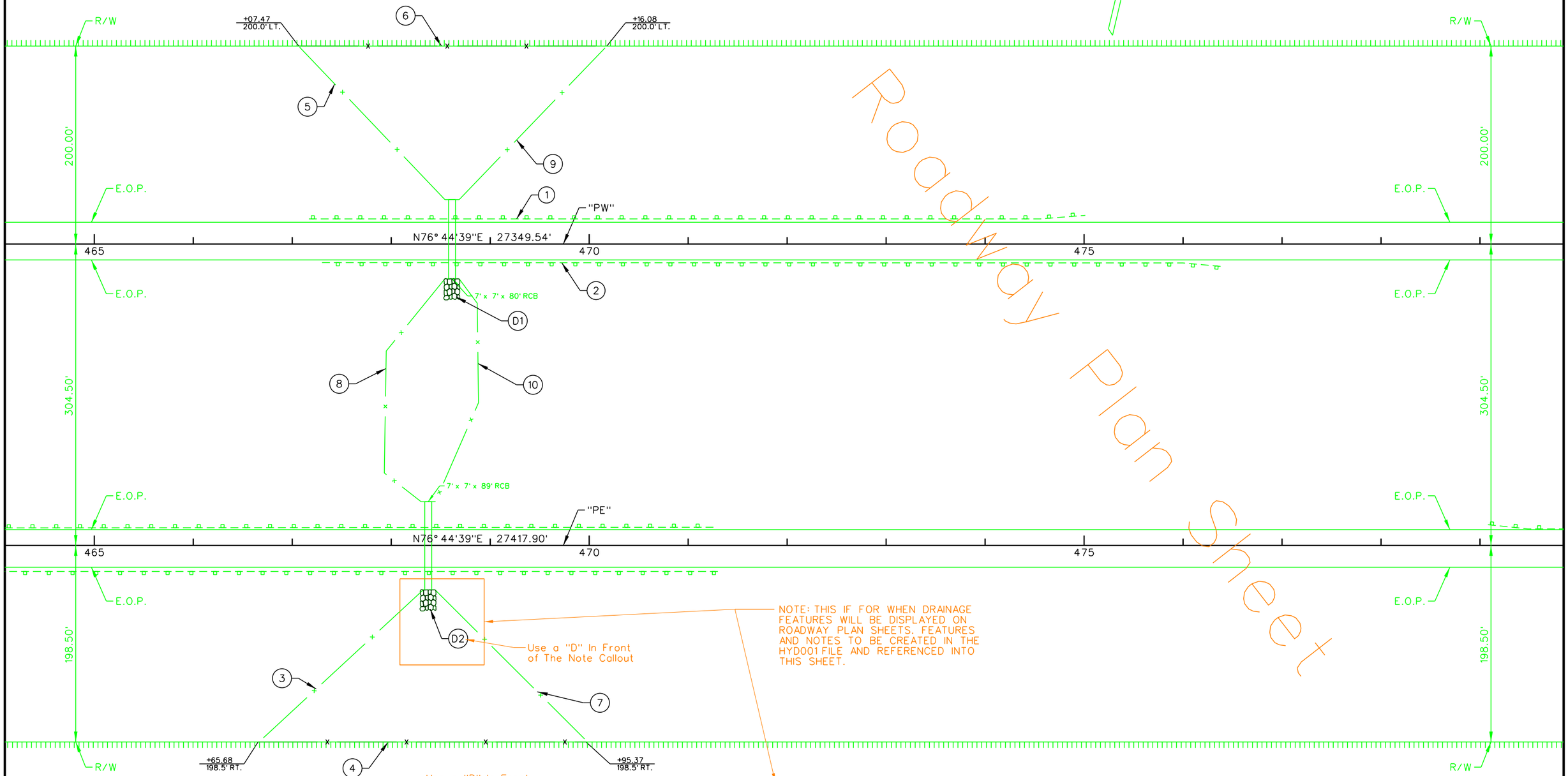
(1) "PW" 467+16.76 "PW" 475+01.24 REMOVE AND RESET GUARDRAIL LT.

(2) "PW" 467+28.09 "PW" 476+37.90 REMOVE AND RESET GUARDRAIL RT.

(5) "PW" 467+07.47 "PW" 468+54.23 REMOVE EXISTING FENCE LT.

(6) "PW" 467+07.47 "PW" 470+16.08 INSTALL TORTOISE FENCE 200.0' LT.

(9) "PW" 468+68.63 "PW" 470+16.08 REMOVE EXISTING FENCE LT.



Roadway Plan Sheet

(3) "PE" 466+65.68 "PE" 468+32.28 REMOVE EXISTING FENCE RT.

(4) "PE" 466+65.68 "PE" 469+95.37 INSTALL TORTOISE FENCE 198.5' RT.

(7) "PE" 468+44.76 "PE" 469+95.37 REMOVE EXISTING FENCE RT.

(D1) "PW" 468+65 EXISTING 7' X 7' RCB. CONSTRUCT CLASS 550 RIPRAP APRON AT OUTLET (RIPRAP A = 14.0').

(D2) "PE" 468+41 EXISTING 7' X 7' RCB. CONSTRUCT CLASS 550 RIPRAP APRON AT OUTLET.

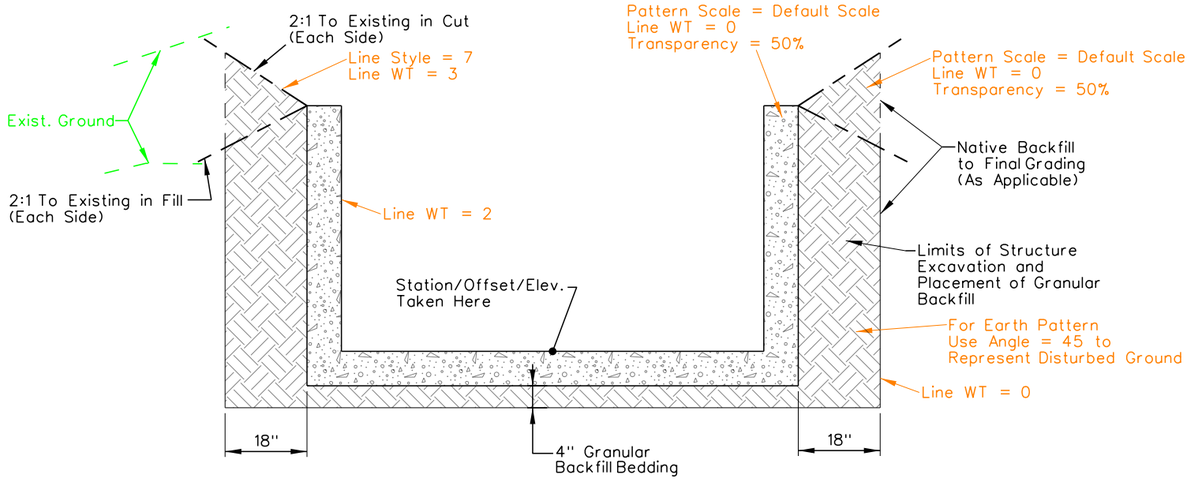
(8) "PE" 468+54.23 "PE" 468+30.18 REMOVE EXISTING FENCE RT.

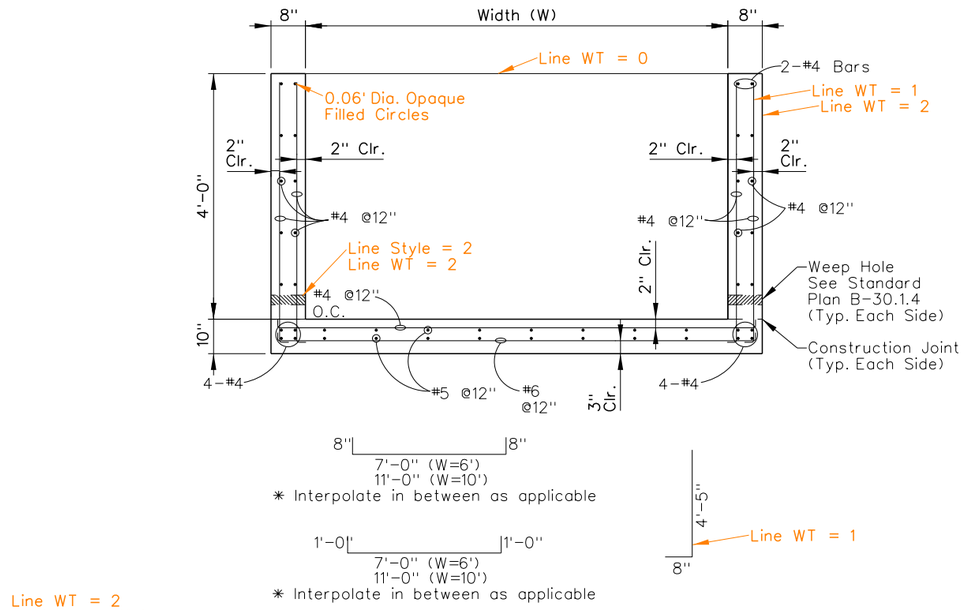
(10) "PE" 468+68.63 "PE" 468+46.31 REMOVE EXISTING FENCE LT.

155.430665:1.000000 PLOT SCALE h9019dxr

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DD1

PRELIMINARY
SUBJECT TO REVISION
2/1/2021 6:17:23 AM





Line WT = 2
Text Size = X-Large

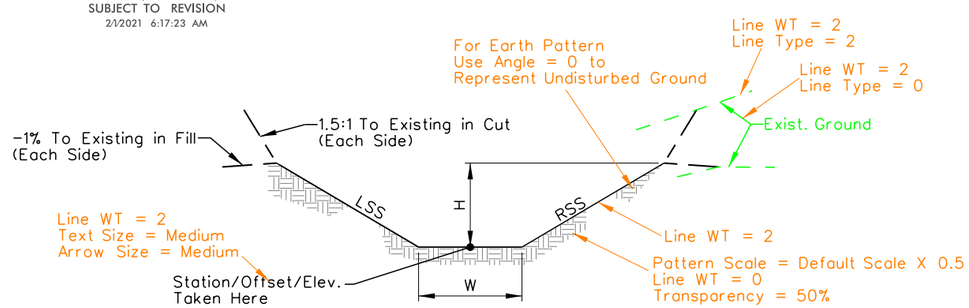
CONCRETE RECTANGULAR CHANNEL

Note: Extend reinforcing from channel into RCB's at each end.

Line WT = 2
Text Size = Medium

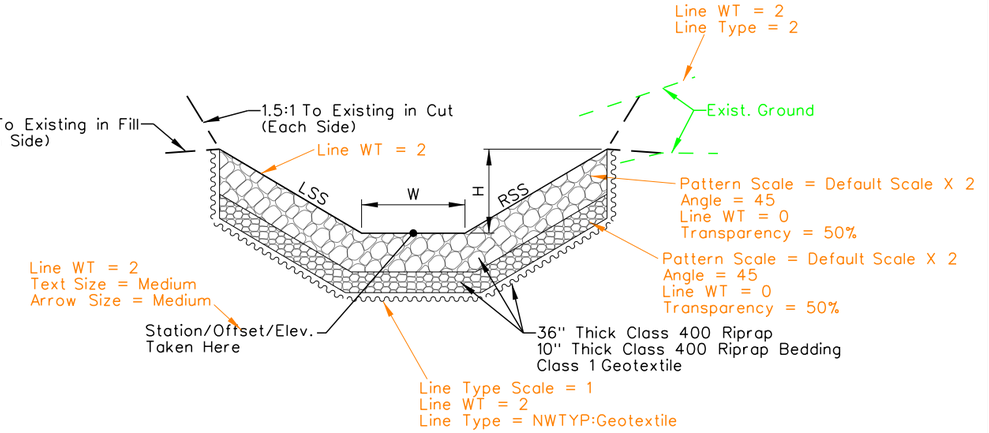
Quantity Information
For Transition from W = 10' to W = 6' Major Concrete = 30 cubic yards Reinforcing Steel = 4581 lbs
For W = 6' Major Concrete = 11.44 CF/LF Reinforcing Steel = 56 LB/LF

Line WT = 2



Modified Earthen Trapezoidal Ditch

Line WT = 2
Text Size = X-Large



Modified Class 300 Riprap Trapezoidal Ditch

Line WT = 2
Text Size = X-Large

NOTE:
THIS SHEET SCALE IS 1" = 6' (DEFAULT SCALE = 0.06).
SHEET SCALE FOR DRAINAGE DETAILS CAN VARY
FROM 1" = 1' TO 1" = 30' DEPENDING ON THE NEED.
DEFAULT SCALES WILL DIFFER DEPENDING ON THE SCALE.

ALL TEXT IS MEDIUM IN SIZE (LEROY) AND LINE
WT = 2 UNLESS NOTED OTHERWISE.

Draw details at a scale that will clearly depict the information on an 11"x17" sheet

Provide an appropriate title for each detail that matches the callout in the construction note. It is recommended to identify the location of each detail with a station/offset.

Special detail sheets should reflect the same drafting standards and level of detail as the standard construction details. Incorporate all dimensioning and other information necessary for quantity calculation and construction of the detailed feature.

It may be helpful to provide legends to define patterning and symbols

It may be helpful to provide borders encompassing individual details and associated notes, sections, etc. as necessary for clarity.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DD2

- LEGEND -

-Class 300 Riprap

-Class 300 Riprap Bedding

-Articulated Concrete Blocks

Text Size = Medium
Line WT = 2

Pattern = Riprap Bedding
Scale = Default Scale X 2
Line WT = 0
Transparency = 50%

Line WT = 2

Contours Can Be Clipped Or Left Behind Proposed Grading

Place Slope Darts In Direction Of Flow And Perpendicular To Contours.

Existing Major Contour
Line WT = 1

Existing Minor Contour
Line WT = 0

Proposed Major Contour
Line WT = 3

Proposed Minor Contour
Line WT = 1

Pattern = Riprap
Scale = Default Scale X 2
Line WT = 0
Transparency = 50%

Line WT = 2

Text Size = Medium

CC

EXTEND RIPRAP TO ELEVATION 6398'

AA

BB

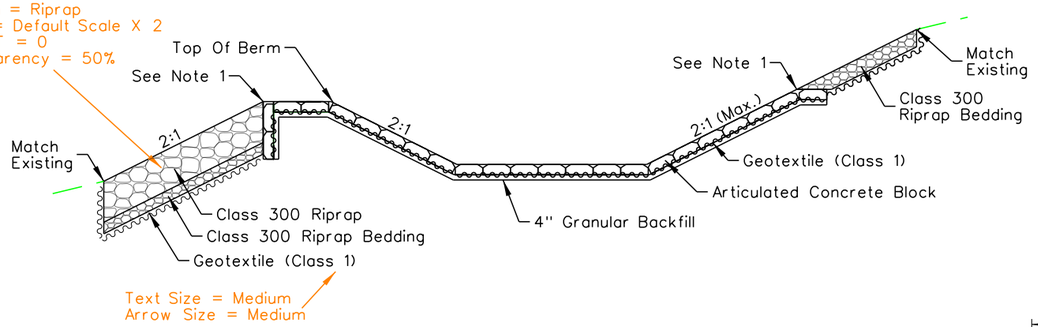
SD

POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
1	"X" 305+95	66.5' LT	6398.00'	TOP OF BERM
2	"X" 306+03	58.5' LT	6398.00'	TOP OF BERM
3	"X" 306+16	46.6' LT	6390.00'	BASIN FLOOR
4	"X" 306+16	36.4' LT	6390.00'	BASIN FLOOR
5	"X" 306+35	43.9' LT	6390.00'	BASIN FLOOR
6	"X" 306+35	33.7' LT	6390.00'	BASIN FLOOR
7	"X" 306+75	39.5' LT	6398.00'	TOP OF BLOCK
8	"X" 306+75	29.5' LT	6398.00'	TOP OF BLOCK
9	"X" 307+00	20.0' LT	6401.38'	MATCH EXISTING
10	"X" 305+95	20.1' LT	6399.00'	ROADWAY HINGE
11	"X" 306+95	25.4' LT	6398.00'	TOP OF BERM
12	"X" 306+03	25.4' LT	6398.00'	TOP OF BERM
13	"X" 306+29	58.5' LT	6398.00'	TOP OF BERM
14	"X" 306+03	19.9' LT	6399.25'	ROADWAY HINGE
15	"X" 306+33	16.2' LT	6400.22'	ROADWAY HINGE
16	"X" 306+75	18.7' LT	6401.16'	ROADWAY HINGE
17	"X" 305+95	45.4' LT	6398.00'	TOP OF BERM
18	"X" 306+03	45.4' LT	6398.00'	TOP OF BERM
19	"X" 305+95	38.4' LT	6398.00'	TOP OF BERM
20	"X" 306+03	38.4' LT	6398.00'	TOP OF BERM
21	"X" 305+93	43.4' LT	6397.00'	OVERFLOW

"X" 306+15 INFILTRATION BASIN GRADING PLAN

Text Size = 2X-Large

Pattern = Riprap
Scale = Default Scale X 2
Line WT = 0
Transparency = 50%



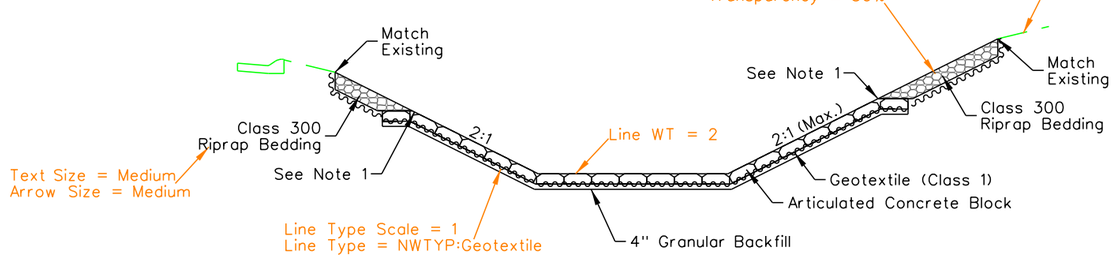
Text Size = Medium
Arrow Size = Medium

SECTION A-A

Text Size = X-Large

Pattern = Riprap Bedding
Scale = Default Scale X 2
Line WT = 0
Transparency = 50%

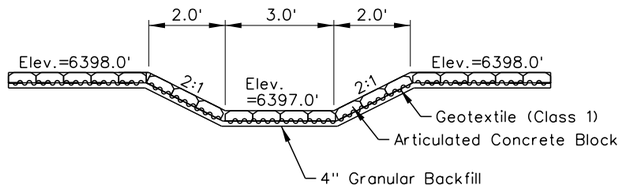
Line Type = 2



Text Size = Medium
Arrow Size = Medium

SECTION B-B

Text Size = X-Large



SECTION C-C

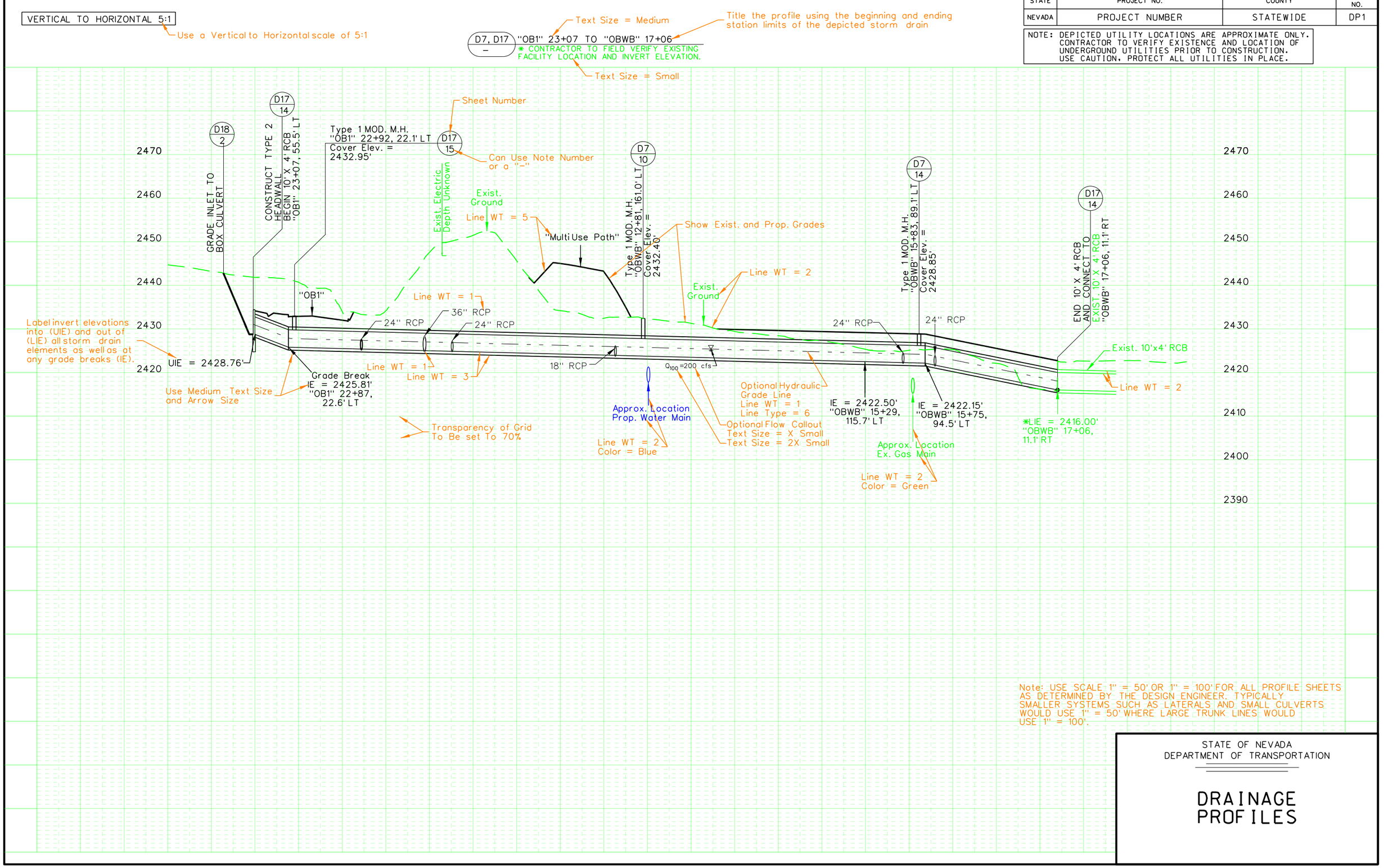
NOTE:
1. SHEET SCALE FOR BASIN DETAILS CAN VARY FROM 1" = 1' TO 1" = 30' DEPENDING ON THE NEED.
2. ALL TEXT IS MEDIUM IN SIZE AND LINE WT = 2 UNLESS NOTED OTHERWISE.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DRAINAGE DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DP1

NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. USE CAUTION, PROTECT ALL UTILITIES IN PLACE.



Note: USE SCALE 1" = 50' OR 1" = 100' FOR ALL PROFILE SHEETS AS DETERMINED BY THE DESIGN ENGINEER. TYPICALLY SMALLER SYSTEMS SUCH AS LATERALS AND SMALL CULVERTS WOULD USE 1" = 50' WHERE LARGE TRUNK LINES WOULD USE 1" = 100'.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILES

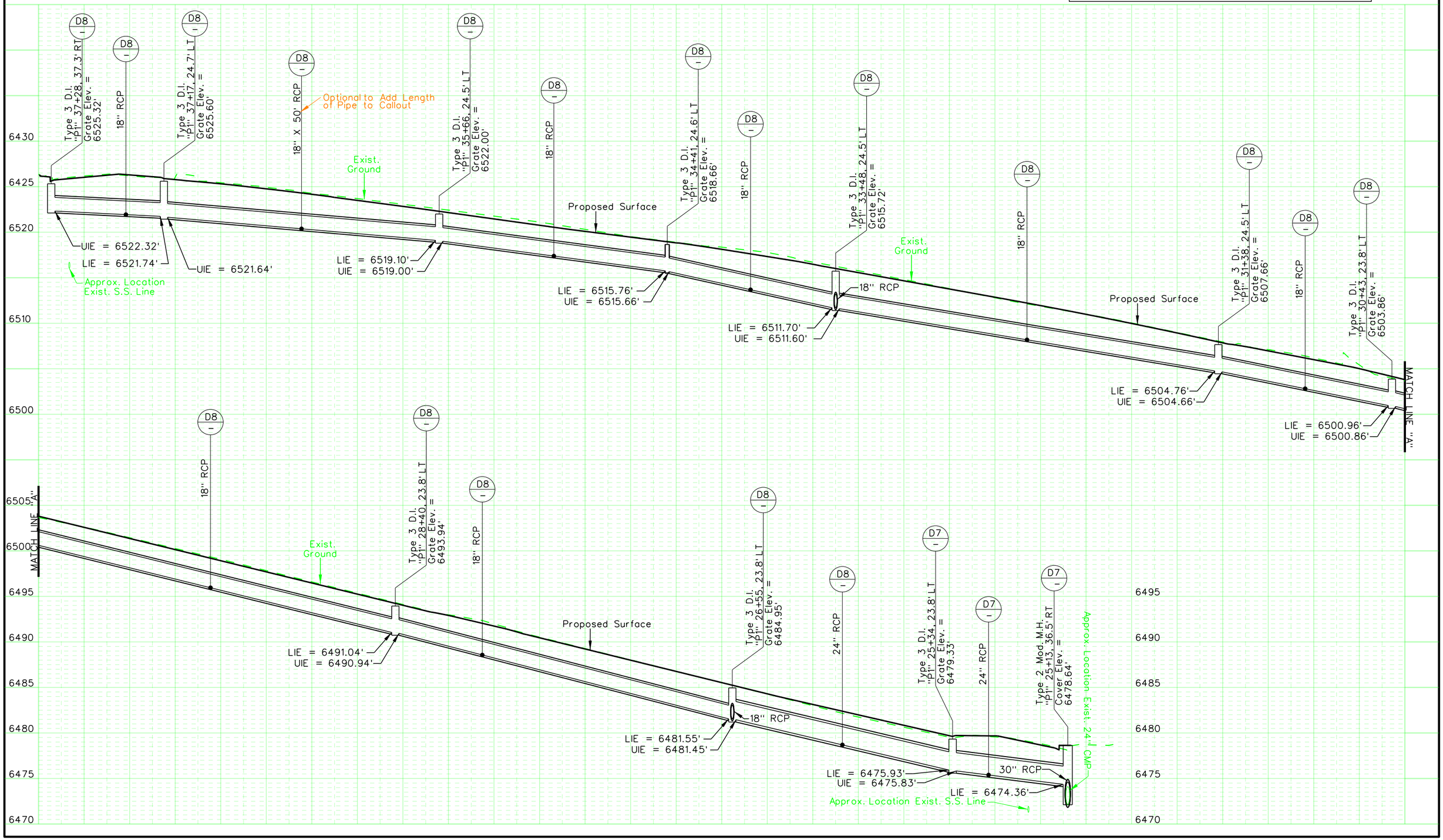
VERTICAL TO HORIZONTAL 5:1

D7-8 "P1" 37+28 TO "P1" 25+13

PRELIMINARY
SUBJECT TO REVISION
2/1/2021 6:17:48 AM

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DP2

NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. USE CAUTION, PROTECT ALL UTILITIES IN PLACE.

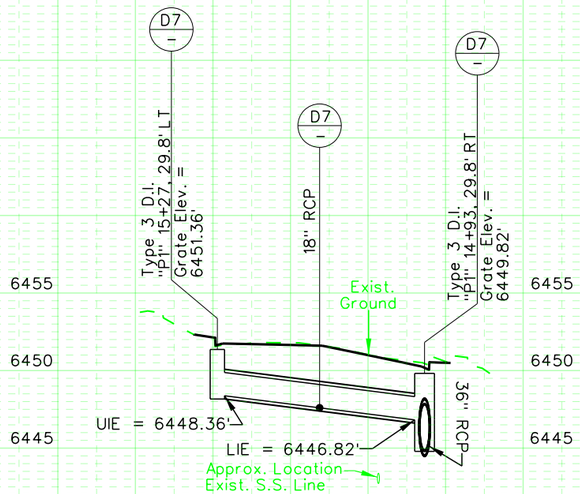


STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DP3

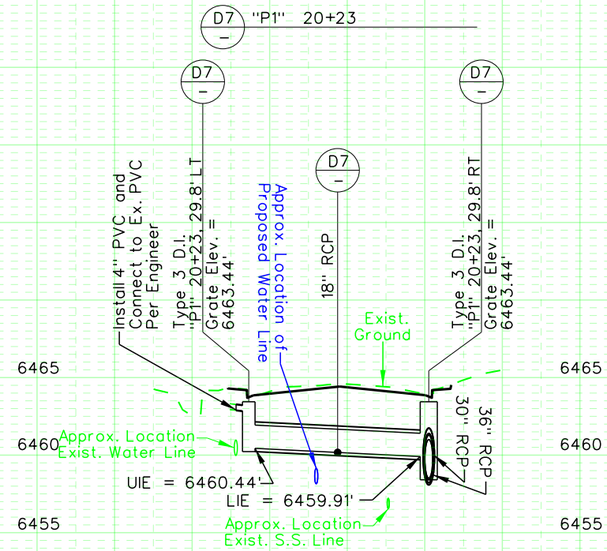
NOTE: DEPICTED UTILITY LOCATIONS ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. USE CAUTION, PROTECT ALL UTILITIES IN PLACE.

VERTICAL TO HORIZONTAL 5:1

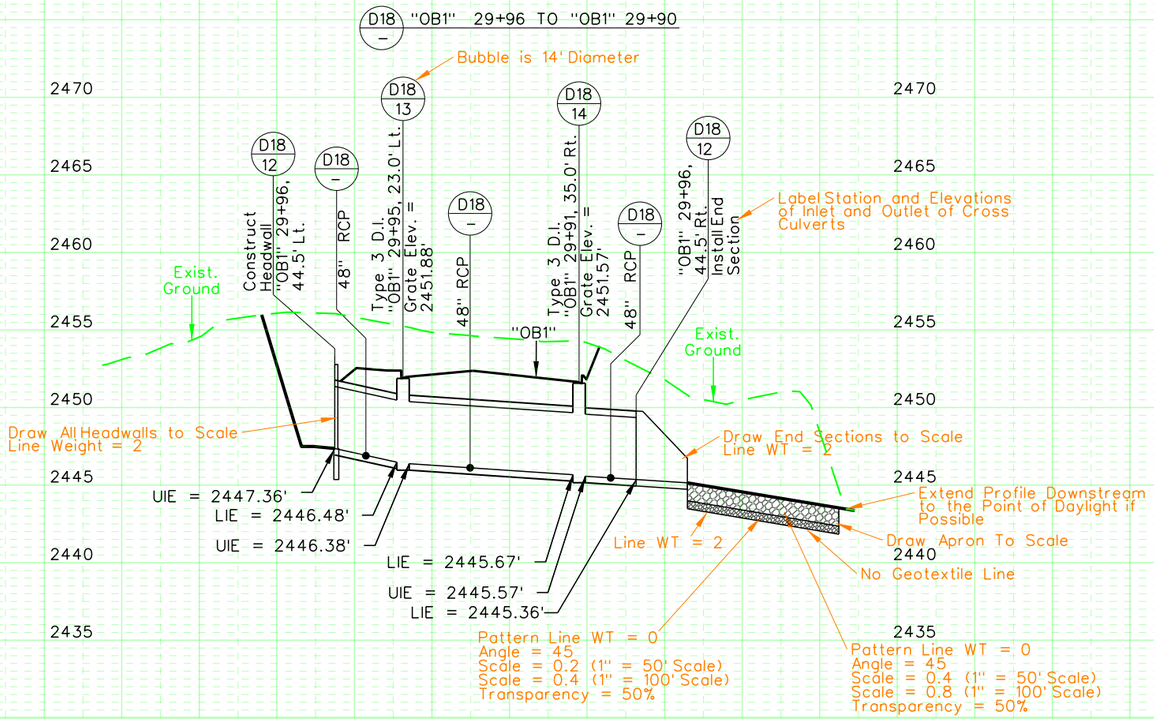
D7 "P1" 15+27



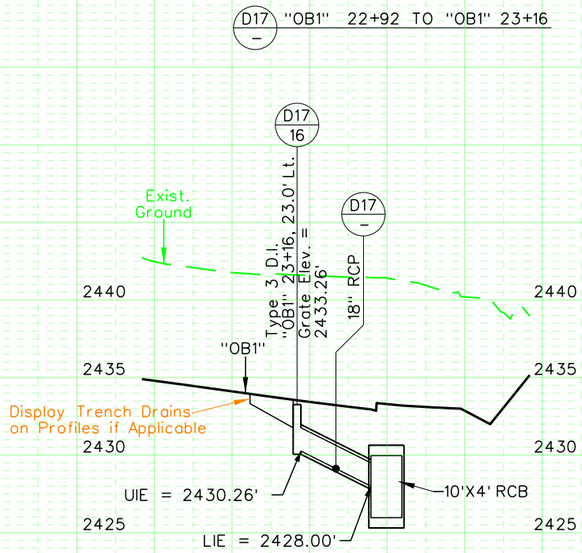
D7 "P1" 20+23



D18 "OB1" 29+96 TO "OB1" 29+90



D17 "OB1" 22+92 TO "OB1" 23+16



Note:
Do not include profiles for standard embankment protectors

Storm Drain and Channel Profiles are not required on a project and up to the discretion of the engineer

Channel Profiles are to be labeled similarly to Storm Drain profiles

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILES

Standard Construction Notes (Sheet 1)

The following is provided as a general guideline for the development of consistent drainage construction notes. The sample notes presented are not all-inclusive and may be modified to reflect specific design requirements.

No mention of Gage or Class indicates the use of 16 Gage CMP or Class III RCP. Only include CMP Gage (14, 12, etc.) and RCP Class (HE-, VE-), IV, V) in the construction note if other than 16 Gage or Class III.

Class C Bedding is used unless otherwise specified.

For multiple culvert, storm drain, or RCB installations, reference station and offset to the centerline of the installations.

All proposed headwalls should be constructed outside of clear zone or should be protected.

For any note in which you deviate from the Standard Plans, put "MODIFIED" in the note.

Instead of using "AT INLET AND OUTLET", "LT AND RT" can be used in the construction notes. Especially when elevations aren't used and it may be unclear which end of the pipe is the inlet and outlet.

Abbreviations

The following table is a list of typical abbreviations common to drainage related construction notes including pipe materials, reference elevations, etc.:

CMP	Corrugated Metal Pipe
CMAP	Corrugated Metal Arch Pipe
RCP	Reinforced Concrete Pipe
RCB	Reinforced Concrete Box
HERCP	Horizontal Elliptical Reinforced Concrete Pipe
VERCP	Vertical Elliptical Reinforced Concrete Pipe
HDPE	High Density Polyethylene
SD	Storm Drain
C&G	Curb and Gutter
DI	Drop Inlet
MH	Manhole
UIE	Upper Invert Elevation
LIE	Lower Invert Elevation
IE	Invert Elevation
BMP	Best Management Practices
RT	Right
LT	Left
ELEV	Elevation
W	Width
H	Height
L	Length

Accuracy

The following table presents accuracy typiocally used for data contained in drainage construction notes. Special cases may require changes to the level of accuracy.

1 ft	Stations
0.1 ft	Offsets
0.01 ft	Elevation Data (UIE, LIE, H, etc.)
1 ft	Pipe Lengths

Pipe lengths are measured to the inside wall of drop inlets, rectangular manholes, box culverts, and round manholes. All pipe lengths are measured along the design slope.

Examples of Drainage Note Format

The following notes are examples and should be used as a guide for creating construction notes.

Culvert, Storm Drain, and RCB Add-Ons

CONSTRUCT CLASS 300 RIPRAP APRON AT OUTLET.

CONSTRUCT CLASS 300 RIPRAP APRON (APRON A = 20')
AT OUTLET.

GRADE OUTLET TO DRAIN PER ENGINEER. (NO DIRECT
PAYMENT)

CONSTRUCT RIPRAP BASIN AT OUTLET. (SEE SHEET DP1, DD1)

CONSTRUCT ENERGY DISSIPATOR AT OUTLET. (SEE SHEET DP1, DD1)

CONSTRUCT MODIFIED TYPE 1 HEADWALL AT INLET. (SEE SHEET DP1, DD1)

CONSTRUCT TRASH RACK AT INLET. (SEE SHEET DP1, DD1)

"A" 14+00 to "A" 14+50: CONSTRUCT 10' X 4' X 100' RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. CONSTRUCT ENERGY DISSIPATOR AT OUTLET. (SEE SHEET DP1, DD1)

Culverts (Circular, Elliptical, Arch)

"A" 14+00 to "A" 14+50: INSTALL 24" X 100' CMP FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). INSTALL METAL END SECTIONS AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: INSTALL 24" X 100' RCP (CLASS V) FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT CULVERT HEADWALL AT INLET AND PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: INSTALL 36" X 100' RCP (CLASS V) FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT SAFETY METAL END SECTIONS AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: INSTALL 30" X 19" X 100' HERCP FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT CULVERT HEADWALLS AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: INSTALL 21" X 15" X 100' CMAP FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT CULVERT HEADWALLS AT INLET AND OUTLET. (SEE SHEET DP1)

Note:
Elliptical and Arch end sections may be hard to come by and could cause manufacturing delays. Consider culvert headwalls instead.

Safety metal end sections should be used when a culvert end is within clear zone without protection from traffic when:
- The culvert is larger than 30" in height when it is perpendicular to traffic flow
- The culvert is larger than 12" in height when it is parallel to traffic flow

Reinforced Concrete Box (RCB)

"A" 14+00 to "A" 14+50: CONSTRUCT 8' X 4' X 100' (span x height x length) RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: CONSTRUCT (3) - 8' X 4' X 100' RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND TYPE 2 HEADWALL AT OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: CONSTRUCT 8' X 4' X 100' RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A' 14+25, 52.0' RT (IE = 3999.50') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: CONSTRUCT 8' X 4' X 100' RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A' 14+25, 52.0' RT (IE = 3999.50') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET (15 DEGREE SKEW) AND OUTLET (30 DEGREE SKEW). (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: CONSTRUCT 8' X 4' X 100' RCB (CLASS B BEDDING) FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. (SEE SHEET DP1)

"A" 14+00 to "A" 14+50: CONSTRUCT 8' X 4' X 100' PRECAST RCB FROM "A" 14+00, 34.6' LT (UIE = 4000.00') TO "A" 14+50, 52.0' RT (LIE = 3999.00'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. (SEE SHEET DP1)

Note:
Where possible, set RCB Skews at 0, 15, 30, or 45 degress in order to accomodate the Standard RCB headwalls.

Culvert and RCB Extensions

"A" 14+00: EXISTING 24" X 100' CMP. REMOVE EXISTING END SECTIONS AT INLET AND OUTLET. EXTEND 4' AT INLET AND 6' AT OUTLET. INSTALL METAL END SECTIONS AT INLET AND OUTLET.

"A" 14+00: EXISTING 24" X 100' RCP, 15.0' RT. REMOVE EXISTING END SECTION AT INLET. EXTEND 4' AT INLET. INSTALL PRECAST END SECTION AT INLET.

"A" 14+00: EXISTING 24" X 100' RCP, 15.0' RT. REMOVE EXISTING END SECTION AT INLET AND HEADWALL AT OUTLET. EXTEND 4' AT INLET AND 6' AT OUTLET. INSTALL PRECAST END SECTION AT INLET AND CULVERT HEADWALL AT OUTLET.

"A" 14+00: INLET OF EXISTING 24" RCP, 15.0' RT. REMOVE EXISTING END SECTION. EXTEND TO "A" 14+00, 21.0' RT (UIE = 4001.00', LIE = MATCH EXISTING). INSTALL PRECAST END SECTION.

"A" 14+00 to "A" 14+50: EXISTING 10' X 4' X 100' RCB. REMOVE EXISTING HEADWALLS AT INLET AND OUTLET. EXTEND 4' AT INLET AND 6' AT OUTLET. INSTALL TYPE 1 HEADWALL AT INLET AND OUTLET. (SEE SHEET DP1)

Standard Construction Notes (Sheet 2)

Drop Inlets and Embankment Protectors

"A" 14+00 — CONSTRUCT TYPE 2 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00') WITH 8" X 20' TRENCH DRAIN BACK ON LINE (H1 = 6", H2 = 12"). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO MANHOLE AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

Note: Typical use with Type 2A and 2B DI as well

"A" 14+00 — CONSTRUCT TYPE 2 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO RCB AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 2 DROP INLET (DOUBLE GRATE), 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO RCB AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 2 DROP INLET (TRIPLE GRATE), 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 2 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 3 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00', J = 2.50'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

Note: Typical use with Type 3A DI as well

"A" 14+00 — CONSTRUCT TYPE 11 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00', J = 2.50', L = 12'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO DROP INLET AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 7 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

Note: Typical use with Type 8 DI as well

"A" 14+00 — CONSTRUCT MODIFIED TYPE 2 DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00', H = 3.75', A = 4.00') WITH 8" X 20' TRENCH DRAIN AHEAD ON LINE (H1 = 6", H2 = 12"). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO MANHOLE AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT TYPE 5 EMBANKMENT PROTECTOR, 28.0' RT WITH 12" HDPE DOWN DRAIN.

"A" 14+00 — CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 28.0' RT WITH 8" X 10' TRENCH DRAIN BACK ON LINE (H1 = 6", H2 = 12"). INSTALL 15" CMP DOWN DRAIN TO "A" 14+00, 20.0' RT.

"A" 14+00 — CONSTRUCT TYPE 5-2G EMBANKMENT PROTECTOR, 28.0' RT. (GRATE ELEV. = 4500.00', H = 3.00') WITH 18" HDPE DOWN DRAIN TO "A" 14+00, 25.0' RT TO "A" 14+00, 50.0' RT (IE = 4490.00').

Note: Measure length of downdrain pipe along pipe slope.

"A" 14+00 — INSTALL 24" X 100' RCP FROM "A" 14+00, 28.0' RT (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO DROP INLET AT "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT INLET. (SEE SHEET DP1)

Note: Typical for use when tying an open inlet pipe into a drop inlet.

"A" 14+00 — CONSTRUCT TYPE C DROP INLET, 28.0' RT (GRATE ELEV. = 4500.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO MANHOLE AT "A" 15+00, 28.0' RT. (SEE SHEET DP1, DD1)

Manholes

"A" 14+00 — CONSTRUCT TYPE 1 MODIFIED MANHOLE, 28.0' RT (COVER ELEV. = 4500.00', H = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO MANHOLE AT "A" 15+00, 28.0' RT. (SEE SHEET DP1)

Note: Typical use with Type 2 and Type 3 Modified Manholes

"A" 14+00 — CONSTRUCT TYPE 1 MANHOLE, 28.0' RT (COVER ELEV. = 4500.00', H = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

Note: Typical use with Type 2 and Type 3 Eccentric Manholes

"A" 14+00 — CONSTRUCT TYPE 4 MANHOLE, 28.0' RT (COVER ELEV. = 4500.00', H = 4.00'). INSTALL 24" X 100' RCP (UIE = 4496.25', LIE = 4495.00') TO "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT OUTLET. (SEE SHEET DP1)

"A" 14+00 — INSTALL 24" X 100' RCP FROM "A" 14+00, 28.0' RT (UIE = 4496.25', LIE = 4495.00') AND CONNECT TO MANHOLE AT "A" 15+00, 28.0' RT. INSTALL PRECAST END SECTION AT INLET. (SEE SHEET DP1)

Note: Typical for use when tying an open inlet pipe into a manhole.

Channels, Ditches, and Dikes

"A" 14+00 / "A" 21+00 — CONSTRUCT CLASS 300 RIPRAP TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (RSS = 2:1, LSS = 2:1, W = 2.0', H = 3.0')

"A" 14+00 / "A" 21+00 — CONSTRUCT EARTHEN V-TYPE DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (RSS = 3:1, LSS = 4:1, H = VARIES TO EXIST)

Channels, Ditches, and Dikes

"A" 14+00 / "A" 24+00 — CONSTRUCT CLASS 300 RIPRAP TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00') TO "A" 24+00, 35.0' RT (IE = 3998.00'). (RSS = 2:1, LSS = 2:1, W = 2.0', H = 3.0')

"A" 14+00 / "A" 21+00 — CONSTRUCT MODIFIED RIPRAP DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (SEE SHEET DD1)

"A" 14+00 / "A" 21+00 — CONSTRUCT BITUMINOUS TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (RSS = 3:1, LSS = 4:1, H = 2.0')

Channels, Ditches, and Dikes (Cont.)

"A" 14+00 / "A" 21+00 — CONSTRUCT CONCRETE TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (LSS = 3:1, H = 2.0', RSS = 4:1)

"A" 14+00 / "A" 21+00 — CONSTRUCT CLASS 300 RIPRAP BEDDING TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (LSS = 3:1, H = 2.0', RSS = 4:1)

"A" 14+00 / "A" 21+00 — CONSTRUCT CLASS 300 RIPRAP TRAPEZOIDAL DITCH FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (BSS = 2:1, TW = 4.0', LSS = 2:1, W = 2.0', H = 3.0', RSS = 2:1)

"A" 14+00 / "A" 21+00 — CONSTRUCT EARTHEN DIKE FROM "A" 14+00, 35.0' RT (DIKE ELEV. = 4000.00') TO "A" 21+00, 35.0' RT (DIKE ELEV. = 4000.00'). (TW = 4.0', SS = 10:1)

"A" 14+00 / "A" 21+00 — CONSTRUCT DITCH AND DIKE FROM "A" 14+00, 35.0' RT (BERM ELEV. = 4000.00') TO "A" 21+00, 35.0' RT (BERM ELEV. = 4000.00'). (H = 2.0', W = 4.0', TW = 4.0', BSS = 2:1)

"A" 14+00 / "A" 21+00 — CONSTRUCT MODIFIED CONCRETE CHANNEL FROM "A" 14+00, 35.0' RT (IE = 4000.00') TO "A" 21+00, 35.0' RT (IE = 3999.00'). (SEE SHEET DD1)

Stormwater Features

"A" 14+00 — INSTALL STORMWATER TREATMENT VAULT, 33.0' RT. (COVER ELEV. = 4000.00'). INSTALL 18" X 10' RCP (UIE = 3990.00', LIE = 3987.00'). CONNECT TO MANHOLE AT "A" 14+00, 43.0' RT. (SEE SHEET DP1)

"A" 14+00 — CONSTRUCT WATER QUALITY BASIN, 30.0' RT. (SEE SHEET DD1)

"A" 14+00 — CONSTRUCT 6" THICK CLASS 300 RIPRAP BEDDING LAYER ON TOP OF ALL DISTURBED GROUND FROM "A" 14+00 TO "A" 21+00.

"A" 14+00 — CONSTRUCT 6" THICK CLASS 300 RIPRAP BEDDING LAYER ON TOP OF ALL DISTURBED GROUND WITHIN STATION/OFFSET LIMITS PROVIDED ON PLAN SHEET.

"A" 14+00 — CONSTRUCT 6" THICK CLASS 300 RIPRAP BEDDING LAYER ON ALL PROPOSED FILL SLOPE FROM "A" 14+00 TO "A" 21+00.

"A" 14+00 — CONSTRUCT RETENTION BASIN, 30.0' RT. (SEE SHEET DD1)

"A" 14+00 / "A" 21+00 — CONSTRUCT RIPRAP DIKE FROM "A" 14+00, 30.0' RT (DIKE ELEV. = 4000.00') TO "A" 21+00, 40.0' RT (DIKE ELEV. = 4000.00'). (SEE SHEET DD1)

Special Notes

"A" 14+00 — CONSTRUCT DETENTION BASIN, 30.0' RT. (SEE SHEET DD1)

"A" 14+00 — CONSTRUCT CLASS 400 RIPRAP REVETMENT, 30.0' RT. (SEE SHEET DD1)

"A" 14+00 — EXISTING DROP INLET, 14.0' RT. ADJUST TO FINAL GRADE.

"A" 14+00 — CONSTRUCT SIDEWALK UNDERDRAIN, 14.0' RT.

Removal Notes

"A" 14+00 — REMOVE EXISTING DROP INLET, 14.0' RT AND 15' SLOTTED DRAIN. REMOVE EXISTING 24" CMP STORM DRAIN TO "A" 12+00, 14.0' RT AND HEADWALL AT OUTLET.

"A" 14+00 — REMOVE EXISTING EMBANKMENT PROTECTOR, 14.0' RT. REMOVE EXISTING 12" CMP DOWN DRAIN TO "A" 12+00, 14.0' RT END SECTION AT OUTLET.

"A" 14+00 — REMOVE EXISTING MANHOLE, 14.0' RT.

"A" 14+00 — REMOVE EXISTING 24" X 30' CMP CROSS CULVERT.

"A" 14+00 — REMOVE EXISTING 24" X 30' CMP CULVERT FROM "A" 14+00, 25.4' RT TO "A" 14+30, 25.4' RT.

"A" 14+00 — REMOVE EXISTING 24" CMP STORM DRAIN FROM "A" 14+00, 25.4' RT TO "A" 14+30, 25.4' RT.

"A" 14+00 — REMOVE EXISTING RCB FROM "A" 14+00, 25.4' RT TO "A" 14+30, 25.4' RT.

"A" 14+00 — ABANDON EXISTING 24" X 30' CMP CULVERT IN PLACE FROM "A" 14+00, 25.4' RT TO "A" 14+30, 25.4' RT AND FILL WITH SLURRY.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	PROJECT NUMBER	STATEWIDE	DS1

DRAINAGE STRUCTURE LIST

PRELIMINARY

SUBJECT TO REVISION
1-Feb-2021

NOTE NO.	DESCRIPTION	STATION TO STATION	RIPRAP BEDDING (CLASS 550)	RIPRAP BEDDING (CLASS 400)	RIPRAP BEDDING (CLASS 300)	RIPRAP (CLASS 550)	RIPRAP (CLASS 400)	RIPRAP (CLASS 300)	GEOTEXTILE (CLASS 1)	ABANDON PIPE	STRUCTURAL STEEL GRATES	CASTINGS	TYPE 3 MANHOLE (MODIFIED)	36-INCH METAL END SECTION (DOWNDRAIN)	18-INCH METAL END SECTION (DOWNDRAIN)	36-INCH DOWNDRAIN PIPE (DIPPED)	24-INCH DOWNDRAIN PIPE	18-INCH DOWNDRAIN PIPE	12-INCH DOWNDRAIN PIPE	ANCHOR ASSEMBLY (36-INCH)	ANCHOR ASSEMBLY (24-INCH)	ANCHOR ASSEMBLY (18-INCH)	ANCHOR ASSEMBLY (12-INCH)	36-INCH PRECAST END SECTION	36-INCH REINFORCED CONCRETE PIPE, CLASS III	18-INCH REINFORCED CONCRETE PIPE, CLASS III	REINFORCING STEEL	CLASS A CONCRETE (MINOR)	PLANTMIXING MISCELLANEOUS AREAS	TYPE 1 CLASS B AGGREGATE BASE	SLURRY CEMENT BACKFILL	GRANULAR BACKFILL	STRUCTURE EXCAVATION	REMOVAL OF CORRUGATED METAL PIPE DOWNDRAIN	REMOVAL OF SLOTTED DRAIN	REMOVAL OF DROP INLET	REMOVE END SECTION	CLEAN CULVERT PIPE
			610 0490	610 0480	610 0470	610 0210	610 0200	610 0190	610 0050	609 1410	609 1040	609 1030	609 0396	608 0510	608 0470	608 0421	608 0400	608 0370	608 0350	608 0290	608 0270	608 0250	608 0230	603 1090	603 0350	603 0170	505 0100	502 0720	402 0100	302 0130	207 0150	207 0110	206 0110	202 1240	202 1231	202 1040	202 0450	202 0300
			CUYD	CUYD	CUYD	CUYD	CUYD	CUYD	SQYD	LINFT	POUND	POUND	EACH	EACH	EACH	LINFT	LINFT	LINFT	LINFT	EACH	EACH	EACH	EACH	EACH	LINFT	LINFT	POUND	CUYD	SQYD	TON	CUYD	CUYD	CUYD	LINFT	LINFT	EACH	EACH	LINFT
		NOTE: ALL LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER																																					
		SHEET 23																																					
	D1	EXISTING (2) - 30" CMP. CONSTRUCT CLASS 400 RIPRAP APRON AT OUTLET.	"PW" 60+90		12			41		57																								67					
		SHEET 40																																					
	D1	EXISTING 10' X 10' RCB. CONSTRUCT CLASS 550 RIPRAP APRON AT OUTLET. FILL RIPRAP VOIDS. (SEE SHEET DD1)	"PW" 319+70	181			546			640																								727					
					11																												11					
	D2	EXISTING 10' X 10' RCB. CONSTRUCT CLASS 550 RIPRAP APRON AT OUTLET. FILL RIPRAP VOIDS. (SEE SHEET DD1)	"PE" 320+37	181			546			640																								727					
					11																												11					
		SHEET D1																																					
	1	REMOVE EXISTING DROP INLET, 22.2' RT. REMOVE 12" CMP DOWNDRAIN AND END SECTION.	"PE" 594+01																															42		1	1	
	2	CONSTRUCT CLASS 400 RIPRAP TRAPEZOIDAL DITCH FROM "PE" 593+25, 58.6' RT TO "PE" 594+34, 128.4' RT to "PE" 595+14, 148.4' RT. (LSS = 2:1, RSS = 2:1, W = 3.0', H = 2.0') VERIFY STATION, OFFSET,AND INVERT ELEVATIONS OF DITCH WITH ENGINEER PRIOR TO CONSTRUCTION.	"PE" 593+25		76			275		470																								458					
	Total		362	88	22	1092	316	0	1807	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2001	42	0	1	1	0

14.0 Right of Way Plans.

General. The right of way plans provide construction and maintenance forces with certain information on property rights secured by the Department that is useful to their operations.

Right of way plans should only be included in the contract plans when showing this information on the roadway plan view sheets would create confusion or result in cluttered information.

Where right of way acquisitions are done in advance of the contract, the Right of Way Survey Services Section will provide right of way sheets with detailed information as to permanent easements, temporary easements, with all applicable information such as bearings, distances, and offsets. The new right of way lines shall also be shown on the plan sheets in green as existing and dimensioned from centerline as necessary, with the exception of the detailed information that would be found in the right of way sheets.

Right of Way Plan Guidelines. The Right of Way Survey Services Section produces the right of way plan sheets. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans.

Right of Way Plan Particulars.

1) Sheet numbering for the right of way plans shall begin with RW1. Multiple sheets shall be numbered RW1, RW2, RW3, etc.

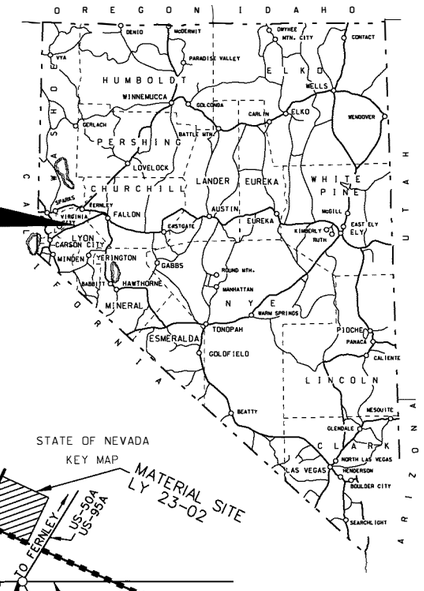
STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW1

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

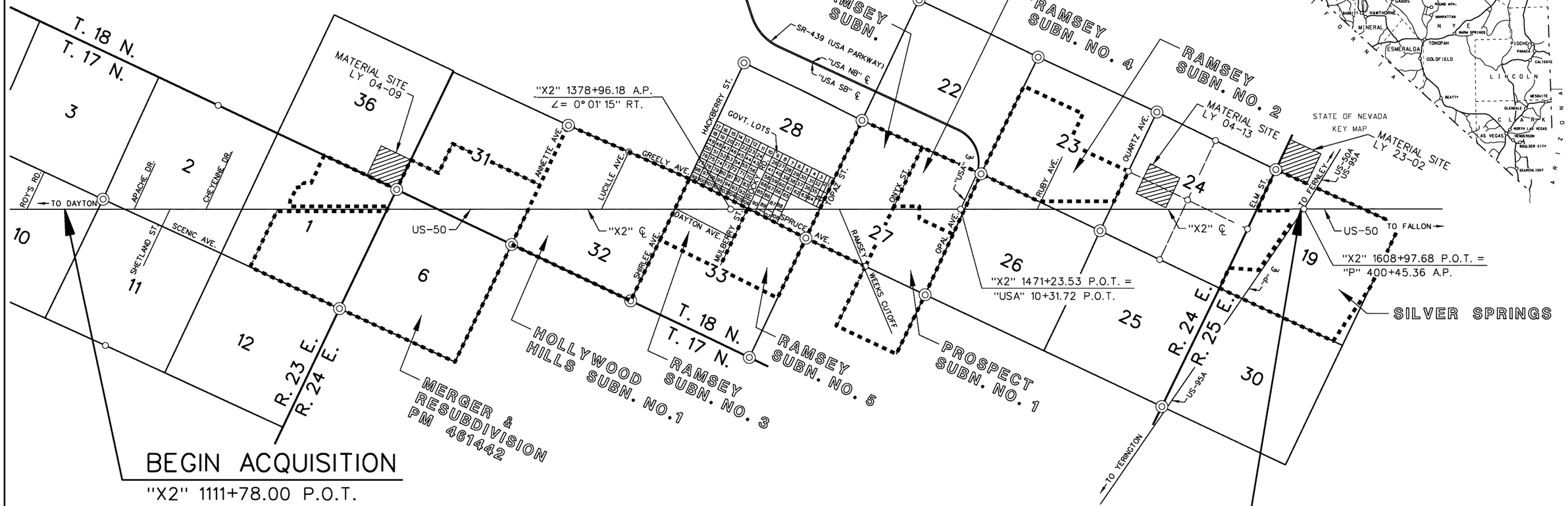
RIGHT-OF-WAY PROJECT

M.D.M.

PROJECT LOCATION



STATE OF NEVADA KEY MAP



BEGIN ACQUISITION

"X2" 1111+78.00 P.O.T.

END ACQUISITION

"X2" 1607+88.37 P.O.T.

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet1.dgn

R/W DIVISION	
TRACED	AKR/SCT
CHECKED	CJH
PHONE (775) 887-7470	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: JUNE 12, 2017

US-50 FROM
ROY'S RD. TO US-95A
WIDEN FROM 2 TO 4 LANES

SCALE 1" = 4,000'

SHEET 1 OF 46

LEGEND OF RIGHT-OF-WAY SYMBOLS

C/A	CONTROL OF ACCESS
℄	CENTERLINE
C/P	PERMISSION TO CONSTRUCT
Δ	DELTA
L	ARC LENGTH
LT.	LEFT
P.C.	POINT OF CURVATURE
P.C.C.	POINT OF COMPOUND CURVATURE
PE	PERMANENT EASEMENT
P/L	PROPERTY LINE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT ON CURVE
P.O.E.	POINT OF ENDING
P.O.T.	POINT ON TANGENT
P.R.C.	POINT OF REVERSE CURVATURE
P.T.	POINT OF TANGENCY
R	RADIUS
REM.	REMAINDER
RT.	RIGHT
R/W	RIGHT-OF-WAY
TE	TEMPORARY EASEMENT

CONTROL OF ACCESS WITH FENCE OR BARRIER. (TICKS FACING AWAY FROM MAINLINE/CENTERLINE DENOTES C/A ON THE R/W LINE. TICKS FACING TOWARDS MAINLINE/CENTERLINE DENOTES C/A INSIDE/WITHIN THE R/W).

CONTROL OF ACCESS WITHOUT A FENCE OR BARRIER. ("DRAGON'S TEETH" FACING AWAY FROM MAINLINE/CENTERLINE DENOTES C/A ON THE R/W LINE. "DRAGON'S TEETH" FACING TOWARDS MAINLINE/CENTERLINE DENOTES C/A INSIDE/WITHIN THE R/W).

LOCATION AT WHICH ACCESS TO THE FREEWAY IS PERMITTED BY THE STATE

SUBDIVISION BOUNDARY

RESERVATION OR PARK BOUNDARY

STATE LINE

COUNTY LINE

CITY OR TOWN LIMITS

SECTION LINE

1/4 SECTION LINE

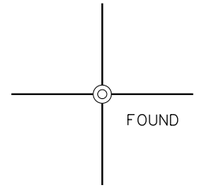
1/16 SECTION LINE

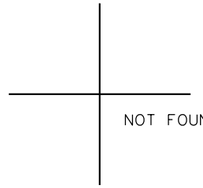
1/64 SECTION LINE

1/256 SECTION LINE

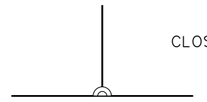
FENCE LINE

SECTION CORNER

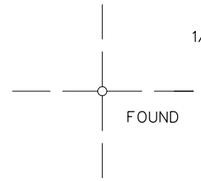


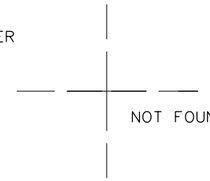


CLOSING SECTION CORNER



1/4 SECTION CORNER





STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

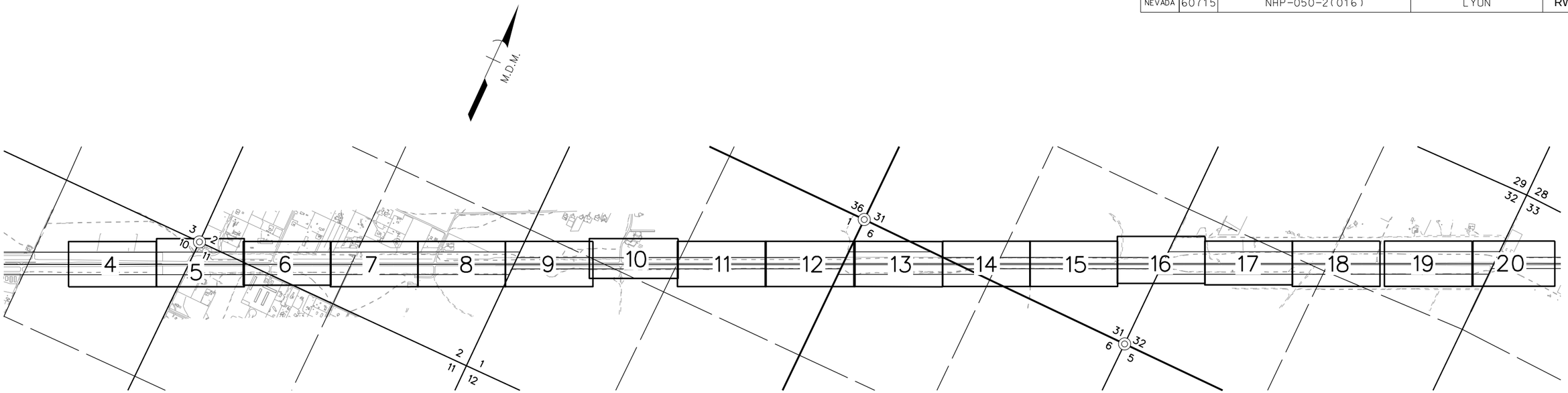
DATE: JUNE 12, 2017

R/W PLANS

SHEET 2 OF 46

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet2.dgn

STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW3



MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet3.dgn

DATE OF LAST REVISION: 09/21/2017 CJH	
R/W DIVISION	
TRACED	AKR/SCT
CHECKED	CJH
PHONE (775) 888-7470	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: JUNE 12, 2017

R/W PLANS

APPROVED: ORIGINAL ON FILE
MANAGER, R/W SURVEY SERVICES

SCALE 1" = 1800'

SHEET 3 OF 46

PARCEL NO. PREFIX: U-050-LY-

STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW4

T. 17 N., R. 23 E., SEC. 10 M.D.M.

NORTH PARCEL
RS 332209

E. 1/16 SEC. LINE

R/W

TO DAYTON

217.00'

BEGIN ACQUISITION
"X2" 1111+78.00 P.O.T.

PREVIOUSLY ACQUIRED
CC 018095

US-50 "X2" ℄

N. 65° 09' 38" E.

1105

1110

1115

R/W

217.00'

183.00'

TO SR-439 (USA PKWY.)

183.00'

P.O.B. = 183.00' RT. "X2" 1111+78.00 P.O.T.

TIE: N. 36° 59' 09" W. - 1,839.01' FROM THE E 1/4 COR. SEC. 10, T. 17 N., R. 23 E., M.D.M.

N. 65° 09' 38" E. - 35.00'

N. 24° 50' 22" W. - 22.00'

S. 24° 50' 22" E. - 22.00'

S. 65° 09' 38" W. - 35.00'

R/W

R/W

020.019TE1

ZANDIAN, REZA, ET AL.

SOUTH PARCEL
RS 332209

N. 1/16 SEC. LINE

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet4.dgn

DATE OF LAST REVISION:	
R/W DIVISION	
TRACED	AKR/SCT
CHECKED	CJH
PHONE (775) 888-7470	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: AUGUST 18, 2017

R/W PLANS

APPROVED: ORIGINAL ON FILE
MANAGER II, R/W SURVEY SERVICES

SCALE 1" = 100'

SHEET 4 OF 46

PARCEL NO. PREFIX: U-050-LY-

STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW5

T. 17 N., R. 23 E., M.D.M.

1500020L 1" DIAMETER STONE

PARCEL 1-C
PM 79282

PARCEL 1-D-1
PM 258502

PARCEL 1-D-2
PM 258502

("PARCEL 4")
PM 544122

FRONTAGE ROAD
PM 544122

WARPATH DR. (PRIVATE)

NORTH PARCEL
RS 332209

LOT 34
SM 80293

PARCEL
020.368TE1
DELETED

PARCEL
020.378TE1
DELETED

P/L

R/W

217.00'

TO DAYTON

NORTH FRONTAGE RD.

PREVIOUSLY ACQUIRED
CC 018095

US-50 "X2" ℄

N. 65° 09'38" E.

1120 1125 1130 1135

183.00'

N. 65° 09'38" E. - 21.76'

P.O.B. = 183.00' RT. "X2" 1124+11.00 P.O.T

TIE: N. 0° 21'44" E. - 1,986.96' FROM THE E 1/4 COR. SEC. 10, T. 17 N., R. 23 E., M.D.M.

PARCEL
020.351TE1
DELETED

TO SR-439 (USA PKWY.)

PARCEL
020.263TE1
DELETED

N. 0° 04'53" W. - 198.22'

S. 0° 55'37" W. - 207.65'

SOUTH PARCEL
RS 332209

020.252TE1
ZANDIAN, REZA, ET AL.

N. 89° 04'22" W. - 16.10'

PINTO ST.

30.00'

RANCHO SUBDIVISION No. 2
SM 80293

LOT 10

LOT 9

LOT 8

LOT 7

LOT 6

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet5.dgn

DATE OF LAST REVISION: 07/09/2018 SXT	
R/W DIVISION	
TRACED	AKR SXT
CHECKED	JPK
PHONE (775) 888-7470	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: AUGUST 18, 2017

R/W PLANS

APPROVED: ORIGINAL ON FILE
MANAGER II, R/W SURVEY SERVICES

SCALE 1" = 100'

SHEET 5 OF 46

PARCEL NO. PREFIX: U-050-LY-

STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW37

T. 18 N., R. 25 E., SEC. 19, M.D.M.

SILVER SPRINGS

SM 66537

CARSON ST.

LOT 12 LOT 13 LOT 14 LOT 15 LOT 16 LOT 17 LOT 18 LOT 19 LOT 20

BLOCK 85

"X2" ℄
Δ = 2° 21'45"
R = 10,000.00'
L = 412.33'

P/L

200.00' LT. "X2" 1598+29.75 P.O.T.

029.215

LOT 6

SILVER STRIKE CASINO, L.L.C.

ROS 179360

LOT 5 LOT 4 LOT 3 LOT 2 LOT 1

LOT 7

LOT 11 LOT 10 LOT 9 LOT 8

R/W

AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS

135.00' LT. "X2" 1601+00.64 P.O.C.

115.81' LT. "X2" 1601+00.34 P.O.C.

P.O.B.

200.00' VARIES

TO SR-439 (USA PKWY.)

029.215TE1

103.91' LT. "X2" 1604+92.00 P.O.C. =
394.17' LT. "P" 398+95.34 P.O.T.

80.00'

GOLDFIELD ST.

BLOCK 84

LOT 13 LOT 14 LOT 15 LOT 16 LOT 17

LOT 12 LOT 11 LOT 10 LOT 9 LOT 8 LOT 7 LOT 6 LOT 5 LOT 4 LOT 3 LOT 2 LOT 1

143.43' LT. "X2" 1604+72.89 P.O.C. =
433.11' LT. "P" 399+15.81 P.O.T.

166.79' LT. "X2" 1605+19.74 P.O.C. =
408.46' LT. "P" 399+62.73 P.O.T.

171.77' LT. "X2" 1606+26.16 P.O.C. =
323.45' LT. "P" 400+29.90 P.O.T.

100.00' LT. "P" 404+23.02 P.O.T. =
374.25' LT. "X2" 1610+10.98 P.O.T.

100.00' VARIES

029.340

ROBERT C. MCFADDEN 2001 TR

405

TO FERNLEY

US-95A / US-50A "P" ℄

N. 6° 41'19" E.

US-50 "X2" ℄

N. 65° 10'53" E.

1600 1605 1610

"X2" 1599+45.45 P.C.

"X2" 1603+57.78 P.R.C.

"X2" 1607+70.12 P.T.

N. 65° 10'52" E. - 128.75'

PREVIOUSLY ACQUIRED

"X2" 1608+98.87 A.P.
∠= 0° 00'01" RT. =
"P" 400+45.36 A.P.
∠= 3° 02'42" LT.

400

TO FALLON

83.00' VARIES

83.00'

R/W

91.16' RT. "X2" 1603+47.63 P.O.C. =
394.17' LT. "P" 396+52.51 P.O.T.

"X2" ℄
Δ = 2° 21'45"
R = 10,000.00'
L = 412.33'

END ACQUISITION

"X2" 1607+88.37 P.O.T.

N. 9° 44'01" E.

US-95A "P" ℄

N. 1/16 SEC. LINE

W. 1/16 SEC. LINE

NDOT

NDOT P/L

YERINGTON

SEE SHEET 40 FOR ENGINEERING BOXES FOR THIS SHEET

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet37.dgn

DATE OF LAST REVISION: 07/19/2017

R/W DIVISION

TRACED	AKR/SXT
CHECKED	CJH
PHONE (775) 888-7470	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: MARCH 16, 2017

R/W PLANS

APPROVED: ORIGINAL ON FILE
MANAGER II, R/W SURVEY SERVICES

SCALE 1" = 100'

SHEET 37 OF 46

PARCEL NO. PREFIX: U-050-LY-

STATE	E.A. NO.	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	60715	NHP-050-2(016)	LYON	RW40

025.195

P.O.B. = 188.00' RT. "X2" 1389+38.54 P.O.T.
TIE: N. 30° 31'58" E. – 6,140.23' FROM THE
SW COR. SEC. 33, T. 18 N., R. 24 E., M.D.M.

DD	S. 65° 10'53" W. – 409.56'
DB	N. 0° 50'13" E. – 116.48'
DE	N. 65° 10'53" E. – 152.80'
DF	S. 87° 50'51" E. – 231.51'

025.195TE1

P.O.B. = 188.00' RT. "X2" 1386+05.00 P.O.T.
TIE: N. 28° 40'53" E. – 5,868.90' FROM THE
SW COR. SEC. 33, T. 18 N., R. 24 E., M.D.M.

DG	N. 65° 10'53" E. – 50.00'
DH	S. 24° 49'07" E. – 52.00'
DI	S. 65° 10'53" W. – 50.00'
DJ	N. 24° 49'07" W. – 52.00'

025.195TE2

P.O.B. = 188.00' RT. "X2" 1389+38.54 P.O.T.
TIE: N. 30° 31'58" E. – 6,140.23' FROM THE
SW COR. SEC. 33, T. 18 N., R. 24 E., M.D.M.

DK	S. 87° 50'51" E. – 189.62'
DL	S. 2° 09'09" W. – 23.56'
DM	N. 87° 48'07" W. – 235.55'
DN	N. 65° 10'53" E. – 51.54'

025.239

P.O.B. = 188.00' RT. "X2" 1389+38.54 P.O.T.
TIE: N. 30° 31'58" E. – 6,140.23' FROM THE
SW COR. SEC. 33, T. 18 N., R. 24 E., M.D.M.

DF	N. 87° 50'51" W. – 231.51'
DO	N. 65° 10'53" E. – 66.15'
DP	S. 87° 50'51" E. – 220.49'
ED	S. 87° 50'51" E. – 11.03'
DQ	S. 65° 10'53" W. – 66.15'

025.289TE1

P.O.B. = 183.00' RT. "X2" 1389+94.86 P.O.T.
TIE: S. 40° 33'18" W. – 3,364.91 FROM THE
E 1/4 COR. SEC. 28, T. 18 N., R. 24 E., M.D.M.

DR	N. 65° 10'53" E. – 46.14'
DS	S. 86° 19'17" E. – 100.61'
DT	S. 2° 09'09" W. – 18.25'
DU	N. 87° 50'51" W. – 130.67'
ED	N. 87° 50'51" W. – 11.03'

026.748

P.O.B. = 1,081.32' LT. "X2" 1470+70.37 P.O.T.
TIE: S. 43° 47'37" W. – 937.25' FROM THE
NE COR. SEC. 27, T. 18 N., R. 24 E., M.D.M.

FD	S. 0° 06'37" E. – 46.49'
FE	Δ = 9° 16'50" R = 165.00' L = 26.73' T.B. = S. 40° 27'53" W.
FF	S. 58° 48'57" E. – 12.06'
FG	S. 11° 37'42" W. – 98.21'
FH	S. 89° 54'56" W. – 14.34'
FI	S. 0° 05'04" E. – 460.01'
FJ	S. 89° 33'27" W. – 70.00'
FK	N. 0° 05'04" W. – 477.22'
FL	Δ = 40° 45'32" R = 235.00' L = 167.17'
FM	N. 89° 33'27" E. – 52.61'

026.808

P.O.B. = 1,081.32' LT. "X2" 1470+70.37 P.O.T.
TIE: S. 43° 47'37" W. – 937.25' FROM THE
NE COR. SEC. 27, T. 18 N., R. 24 E., M.D.M.

FM	S. 89° 33'27" W. – 52.61'
FN	Δ = 17° 01'39" R = 235.00' L = 69.84' T.B. = N. 40° 40'28" E.
FO	S. 0° 04'22" W. – 45.07'

026.813

P.O.B. = 1,081.32' LT. "X2" 1470+70.37 P.O.T.
TIE: S. 43° 47'37" W. – 937.25' FROM THE
NE COR. SEC. 27, T. 18 N., R. 24 E., M.D.M.

FP	N. 89° 33'27" E. – 66.61'
FQ	Δ = 28° 34'41" R = 165.00' L = 82.30' T.B. = S. 69° 02'34" W.
FD	N. 0° 06'37" W. – 46.49'

029.085

P.O.B. = 200.00' LT. "X2" 1591+43.07 P.O.T.
TIE: S. 0° 30'57" E. – 1,528.65' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

A	S. 0° 36'32" W. – 91.90'
B	S. 65° 10'53" W. – 33.22'
C	N. 0° 36'32" E. – 91.90'
D	N. 65° 10'53" E. – 33.22'

029.091

P.O.B. = 200.00' LT. "X2" 1591+43.07 P.O.T.
TIE: S. 0° 30'57" E. – 1,528.65' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

E	N. 0° 36'32" E. – 101.87'
F	N. 65° 10'53" E. – 31.72'
G	S. 24° 49'07" E. – 92.00'
I	S. 24° 49'07" E. – 83.00'
J	S. 65° 10'53" W. – 114.92'
A	N. 0° 36'32" E. – 91.90'

029.091TE1

P.O.B. = 200.00' LT. "X2" 1591+43.07 P.O.T.
TIE: S. 0° 30'57" E. – 1,528.65' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

E	N. 0° 36'32" E. – 33.22'
F	N. 65° 10'53" E. – 61.20'
G	S. 24° 49'07" E. – 30.00'
H	S. 65° 10'53" W. – 75.46'

029.111

P.O.B. = 200.00' LT. "X2" 1593+68.54 P.O.T.
TIE: S. 8° 39'36" E. – 1,450.48' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

L	S. 24° 49'07" E. – 83.00'
M	S. 65° 10'53" W. – 150.00'
I	N. 24° 49'07" W. – 83.00'
K	N. 65° 10'53" E. – 150.00'

029.138

P.O.B. = 200.00' LT. "X2" 1593+68.54 P.O.T.
TIE: S. 8° 39'36" E. – 1,450.48' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

N	N. 65° 10'53" E. – 50.00'
O	S. 24° 49'07" E. – 83.00'
P	S. 65° 10'53" W. – 50.00'
L	N. 24° 49'07" W. – 83.00'

029.147

P.O.B. = 200.00' LT. "X2" 1595+68.54 P.O.T.
TIE: S. 16° 30'05" E. – 1,407.99' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

R	S. 24° 49'07" E. – 83.00'
S	S. 65° 10'53" W. – 150.00'
O	N. 24° 49'07" W. – 83.00'
Q	N. 65° 10'53" E. – 150.00'

029.174

P.O.B. = 200.00' LT. "X2" 1595+68.54 P.O.T.
TIE: S. 16° 30'05" E. – 1,407.99' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

T	N. 65° 10'53" E. – 50.00'
U	S. 24° 49'07" E. – 83.00'
V	S. 65° 10'53" W. – 50.00'
R	N. 24° 49'07" W. – 83.00'

029.183

P.O.B. = 200.00' LT. "X2" 1597+18.54 P.O.T.
TIE: S. 22° 36'45" E. – 1,394.22' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

X	S. 24° 49'07" E. – 83.00'
Y	S. 65° 10'53" W. – 100.00'
U	N. 24° 49'07" W. – 83.00'
W	N. 65° 10'53" E. – 100.00'

029.201

P.O.B. = 200.00' LT. "X2" 1597+18.54 P.O.T.
TIE: S. 22° 36'45" E. – 1,394.22' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

Z	N. 65° 10'53" E. – 80.00'
AA	S. 24° 49'07" E. – 83.00'
AB	S. 65° 10'53" W. – 80.00'
X	N. 24° 49'07" W. – 83.00'

029.215

P.O.B. = 115.81' LT. "X2" 1601+00.34 P.O.C.
TIE: S. 37° 17'03" E. – 1,511.82' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

AD	S. 65° 10'53" W. – 300.00'
AA	N. 24° 49'07" W. – 83.00'
AE	N. 65° 10'53" E. – 31.22'
AF	N. 78° 32'12" E. – 276.25'
AC	S. 24° 49'07" E. – 19.19'

029.215TE1

P.O.B. = 115.81' LT. "X2" 1601+00.34 P.O.C.
TIE: S. 37° 17'03" E. – 1,511.82' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

AC	N. 24° 49'07" W. – 19.19'
AG	S. 78° 32'12" W. – 50.99'
AH	N. 24° 49'07" W. – 22.65'
AI	N. 65° 10'53" E. – 95.00'
AJ	S. 24° 49'07" E. – 34.00'
AK	N. 65° 10'53" E. – 171.00'
AL	N. 24° 49'07" W. – 16.00'
AM	N. 65° 10'53" E. – 64.89'
AN	S. 52° 32'33" E. – 40.24'
AO	S. 65° 10'53" W. – 300.00'

029.340

P.O.B. = 103.91' LT. "X2" 1604+92.00 P.O.C.
TIE: S. 50° 42'57" E. – 1,640.97' FROM THE
NW COR. SEC. 19, T. 18 N., R. 25 E., M.D.M.

AS	N. 52° 32'33" W. – 44.00'
AP	N. 37° 27'27" E. – 53.00'
AQ	N. 61° 25'12" E. – 108.34'
AR	S. 37° 27'27" W. – 152.00'

MAP ID NO.: 27411
\District 2\73475\037_RightOfWay\RW Plans\73475_Sheet40.dgn

DATE OF LAST REVISION: 01/02/2019 SXT
R/W DIVISION
TRACED AKR / SXT
CHECKED
PHONE (775) 888-7470

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

LY-04

DATE: MARCH 16, 2017

R/W PLANS

APPROVED: ORIGINAL ON FILE
MANAGER II, R/W SURVEY SERVICES

SCALE 1" = 100'

SHEET 40 OF 46

PARCEL NO. PREFIX: U-050-LY-

PROPERTY SCHEDULE

STATE OF NEVADA DEPT. OF TRANSPORTATION

ALL AREAS ARE SHOWN IN SQUARE FEET UNLESS OTHERWISE NOTED

PROJECT NO.	E.A. NO.	COUNTY	SHEET NO.
SPF-050-2(019)	73475	LYON	RW44

PARCEL NO.	GRANTOR	GROSS AREA OF ACQSN.	R/W AREA	EXCESS AREA	REMAINDER		ACQUISITION DATA			SURPLUS LAND DATA				REMARKS
					LT.	RT.	INST. OR DOC.	BK. PG.	DATE TYPE	AREA	INST. OR DOC.	BK. PG.	DATE TYPE	
025.023	THE WHITE FAMILY TRUST	23,296	23,296			3.21 AC.			3/22/18 GBS					TOTAL ACQUISITION
025.065	NASHLUND, BRETT A. & JENNIFER	57492	57492				586032		9/11/18 GBS					TOTAL ACQUISITION
025.107	LACOE, ANTHONY G.	23,292	23,292			54,321	579727		04/27/18 GBS					
025.126	LYON COUNTY	7,508	7,508											GREELEY AVENUE
025.128TE1	PLEASANT SPRING PROPERTIES LLC													PARCEL DELETED PER R/W DELETION MEMO, DATED 05/16/18
025.149	ENTRUST ADMINISTRATION, INC ET AL.	21,291	21,291			67,266	586326		9/18/18 GBS					
025.149TE1	ENTRUST ADMINISTRATION, INC ET AL.	586					586327		9/18/18 EASE					TEMPORARY CONSTRUCTION EASEMENT
025.183	LYON COUNTY	6,989	6,989											MULBERRY STREET
025.195	LEIALOHA, ROY B. SR., AND HELEN G.	29,523	29,523			8.32 AC.								
025.195TE1	LEIALOHA, ROY B. SR., AND HELEN G.	2,600	2,600											TEMPORARY CONSTRUCTION EASEMENT
025.195TE2	LEIALOHA, ROY B. SR., AND HELEN G.	4,991	4,991											TEMPORARY CONSTRUCTION EASEMENT
025.217TE1	DITMARS, KERRY D.													PARCEL DELETED PER R/W SETTING REVISION #4, DATED 1/30/18
025.231TE1	GOWINS, ROBERT & MOHNI, ROBERT LEE													PARCEL DELETED PER R/W SETTING REVISION #4, DATED 1/30/18
025.239	LYON COUNTY	6,946	6,946											SPRUCE AVENUE
025.289TE1	TAYLOR, JOHN BOYD	2,401					580850		05/18/18 EASE					TEMPORARY CONSTRUCTION EASEMENT
025.750TE1	LYON COUNTY													PARCEL DELETED PER R/W SETTING REVISION #2, DATED 12/20/16
025.767TE1	UNITED STATES OF AMERICA	1,669												TEMPORARY CONSTRUCTION EASEMENT
025.768	LYON COUNTY	3,323	3,323											TOPAZ STREET
025.773	HALL, GEORGE R. & MARY B.	5,642	5,642		3.15AC		580482		05/15/18 GBS					
025.773TE1	HALL, GEORGE R. & MARY B.	166					580483		05/15/18 EASE					TEMPORARY CONSTRUCTION EASEMENT
025.836	ANTLES, CARL D. & GENEVIEVE M.	2,923	2,923		2.42AC		579143		04/13/18 GBS					
025.905	H. SIEGEL & R. DENN TRUST	2,923	2,923		54,074		571533		10/19/17 DEED					
025.906	MONTOOTH TRUST	6966	6966			59566	584567		08/09/18 GBS					TO BE DEEDED TO LYON COUNTY

STATE OF NEVADA **LY-04**

DEPT. OF TRANSPORTATION R/W DIVISION

DATE: JUNE 12, 2017

R/W PLANS

SHEET 44 OF 46 SHEETS

MAP ID NO.: 27411 | FILE NAME: Ly73475Ph2.xls | CHECKED BY: | DATE OF LAST REVISION: 09/16/19 SKS

15.0 Permanent Striping Details.

General. The permanent pavement marking sheets show the necessary details for the correct placement of materials used to permanently mark the surfaces of finished public traveled ways. This work normally consists of lane striping, crosswalks, stop and yield bars, words and symbols.

Permanent Striping Detail Guidelines. The permanent pavement marking sheets shall generally be arranged in the same order as the roadway plan sheets. The use of match lines can be used as appropriate. Indicate the color, pattern, and width of lines (if greater than 4-inches). Double lines such as double solid yellow line, should be indicated.

The striping plan layout should be based on the post construction condition. If the project is staged, each stage must be shown separately and the stages identified in the title block of the associated sheets.

Markings to be placed by state forces shall be shown separately from contracted work and the title blocks shall include the phrase “By State Forces.”

All temporary pavement markings shall be included in the traffic control plans.

Location control lines, stationing, and station designations shall be shown. Lane widths shall be dimensioned from the alignment. The limits of each stripe should be marked with a “plus station” (i.e. +62) to the nearest foot. When alignments are not available, it is acceptable to dimension from edge of pavement.

Show any edges of pavement, curb faces (including channeling islands), intersections, approaches, driveways, curb access ramps and railroad crossings. Also show street names of major driveways or approaches.

Show all stripes, directional arrows, railroad crossing markings, special lane use symbols, chevrons, dual and triple left turn guide lines, dual right turn guide lines, stop bars and crosswalks. Special marking details, such as new types of symbols, should be located in the permanent pavement marking sheets.

Each sheet that contains a crosswalk and/or stop bar shall also include the following note:

The locations of crosswalks and stop bars are controlled by the associated curb ramps per Standard Plan Sheet ST-7 unless indicated otherwise. Refer to the structure list for exact locations of curb ramps.

If applicable, place the following note on each sheet:

Lane widths shall be measured from the control line, shoulder dimensions are for reference only.

Permanent Striping Detail Particulars.

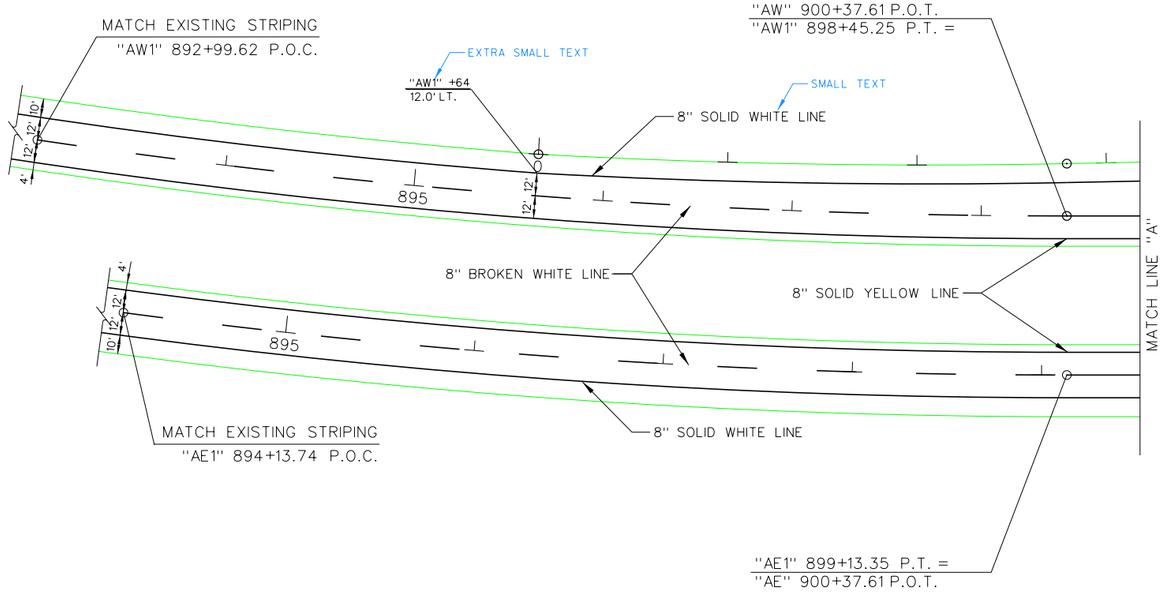
1) Curb ramps shall be shown in conjunction with the crosswalks in a manner that correlates to the proposed location of the curb ramp. Where crosswalks are skewed to the curb line the associated curb ramps or island openings shall be shown as being oriented in the direction of pedestrian travel, not perpendicular to the curb.

2) Sheet numbering for the permanent striping details shall begin with ST1. Multiple sheets shall be numbered ST1, ST2, ST3, etc.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-080-1(114)9	WASHOE	ST1

FT=3

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.



NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: UNLESS OTHERWISE NOTED ALL LINE STYLE AND WEIGHTS SHALL BE CONTROLLED BY THE SETTINGS MANAGER.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC DIVISION.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

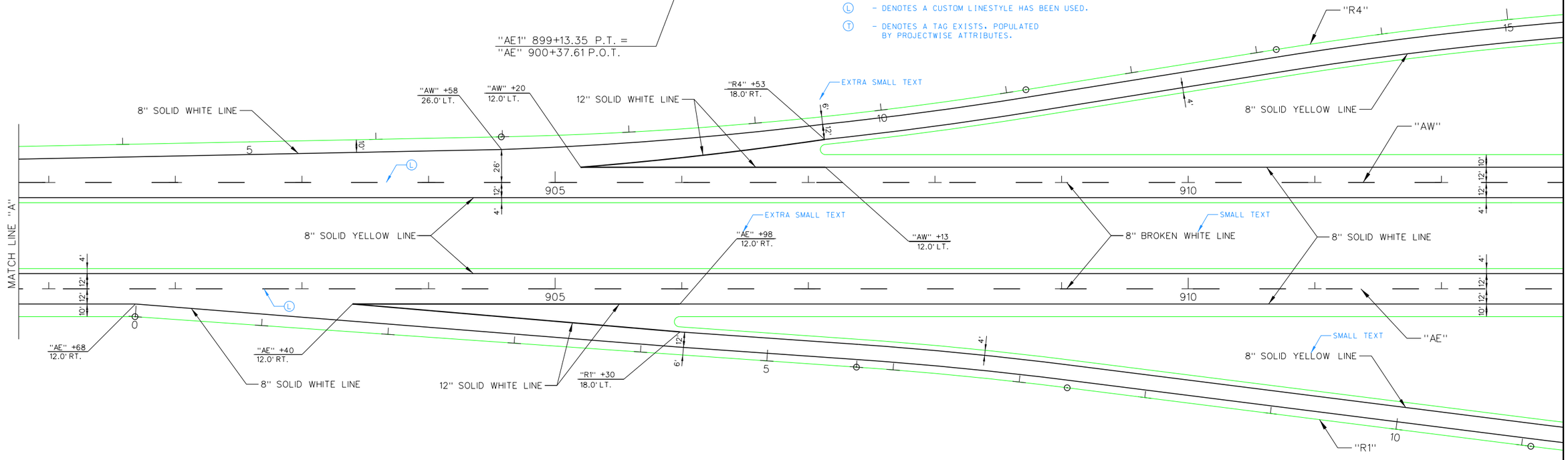
NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



RURAL STRIPING

1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

(T) PERMANENT STRIPING DETAILS

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: UNLESS OTHERWISE NOTED ALL LINE STYLE AND WEIGHTS SHALL BE CONTROLLED BY THE SETTINGS MANAGER.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT.

(C) - DENOTES CELLS HAVE BEEN USED.

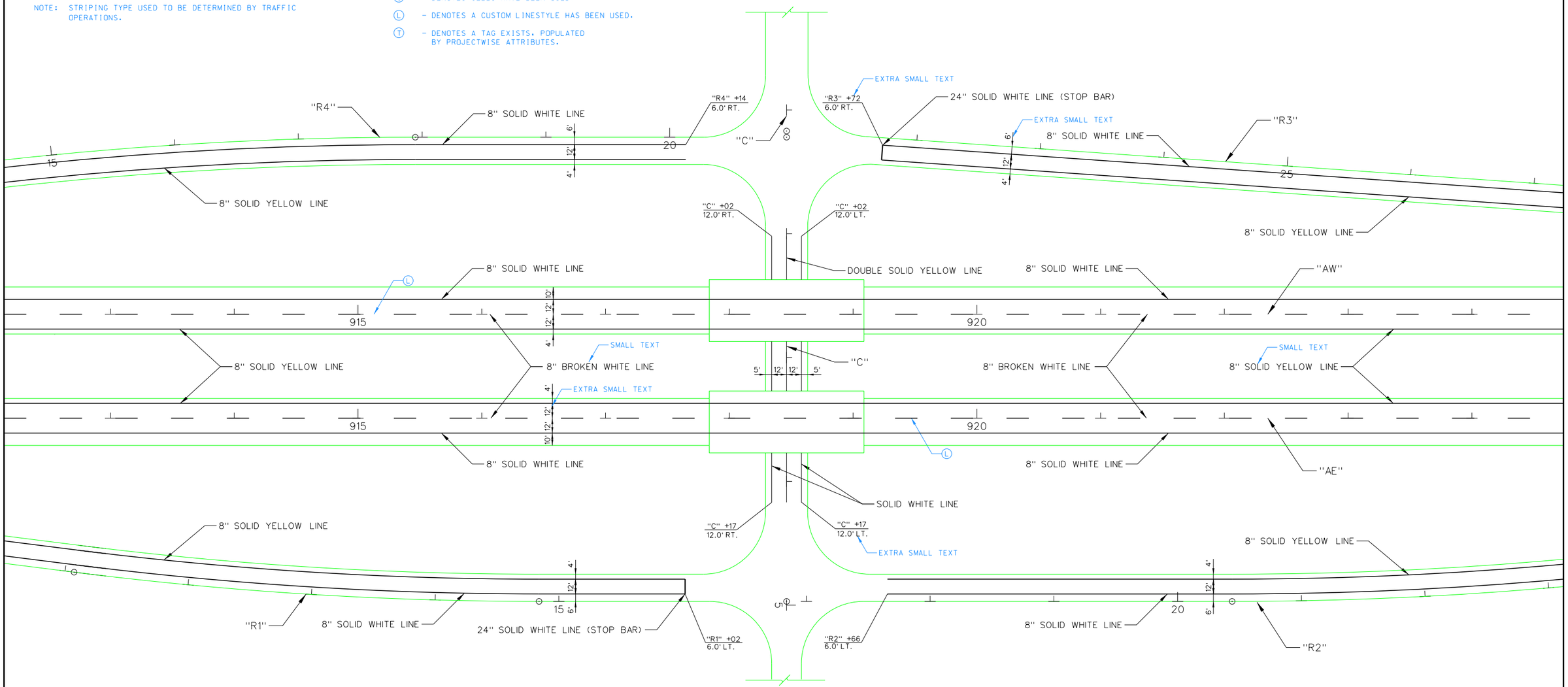
(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-080-1(114)9	WASHOE	ST2

FT=3

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE. SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.



RURAL STRIPING
1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

(T)

PERMANENT STRIPING DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-050-1(11)9	WHITE PINE	ST3

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT TYPE PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

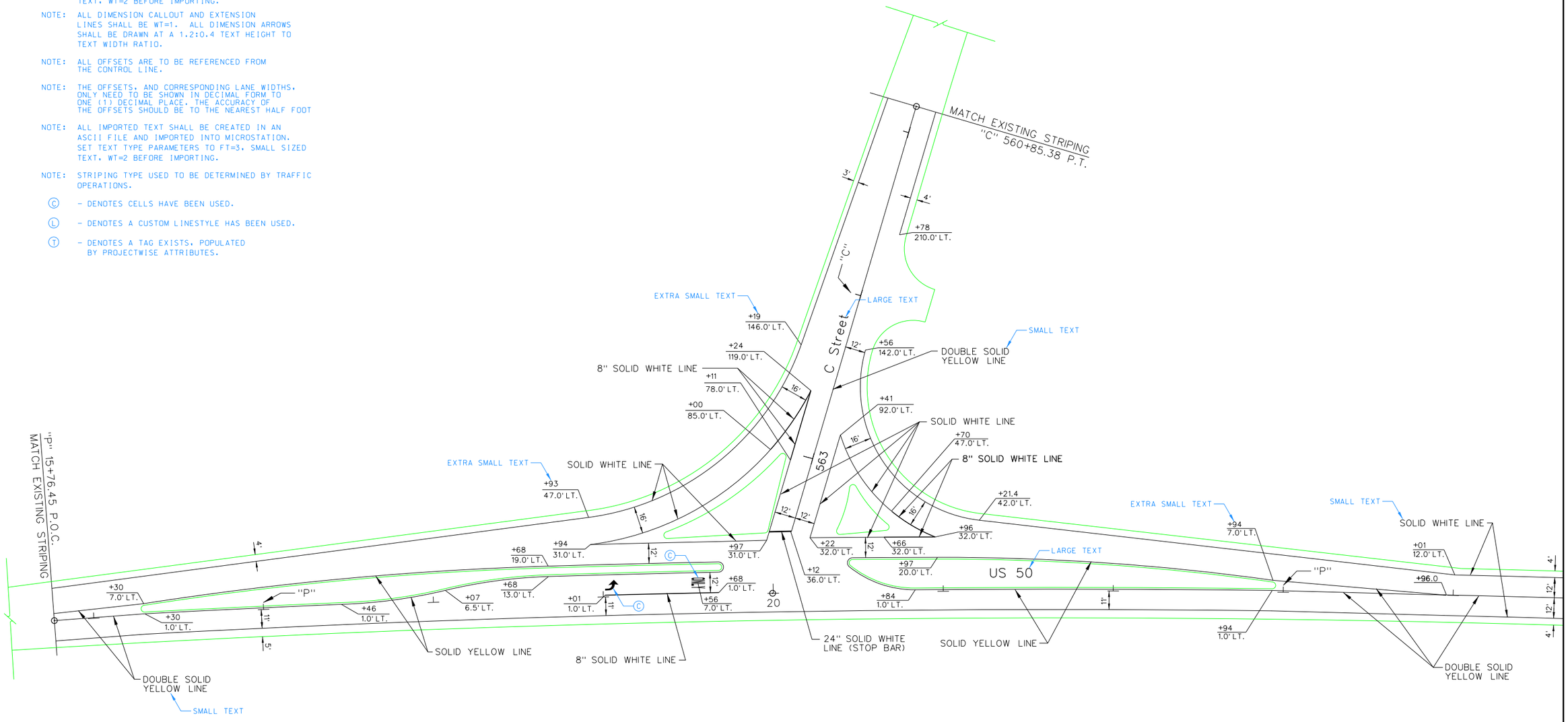
Ⓒ - DENOTES CELLS HAVE BEEN USED.

Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

FT=3

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.



RURAL STRIPING

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

Ⓣ

PERMANENT STRIPING DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-095-1(2)	CHURCHILL	ST4

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT

Ⓒ - DENOTES CELLS HAVE BEEN USED.

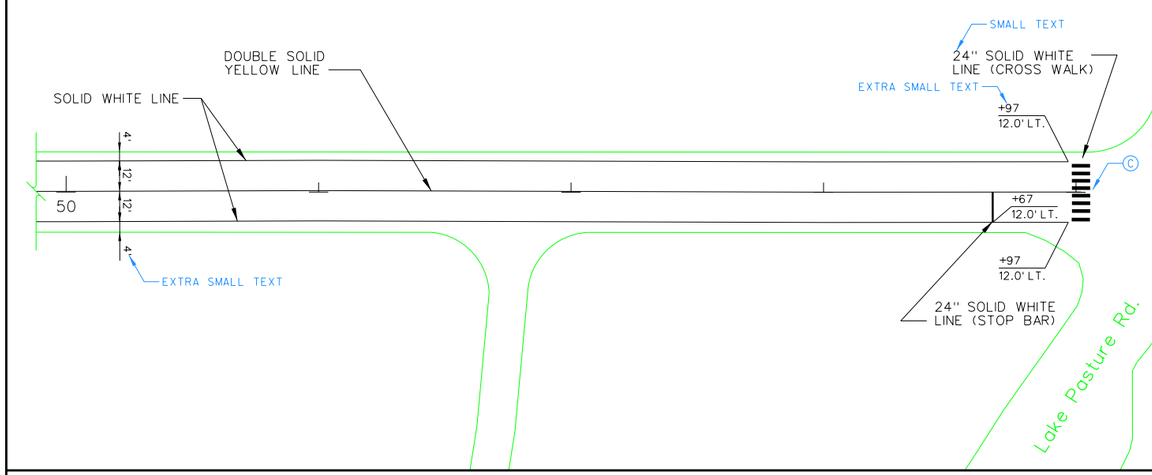
Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

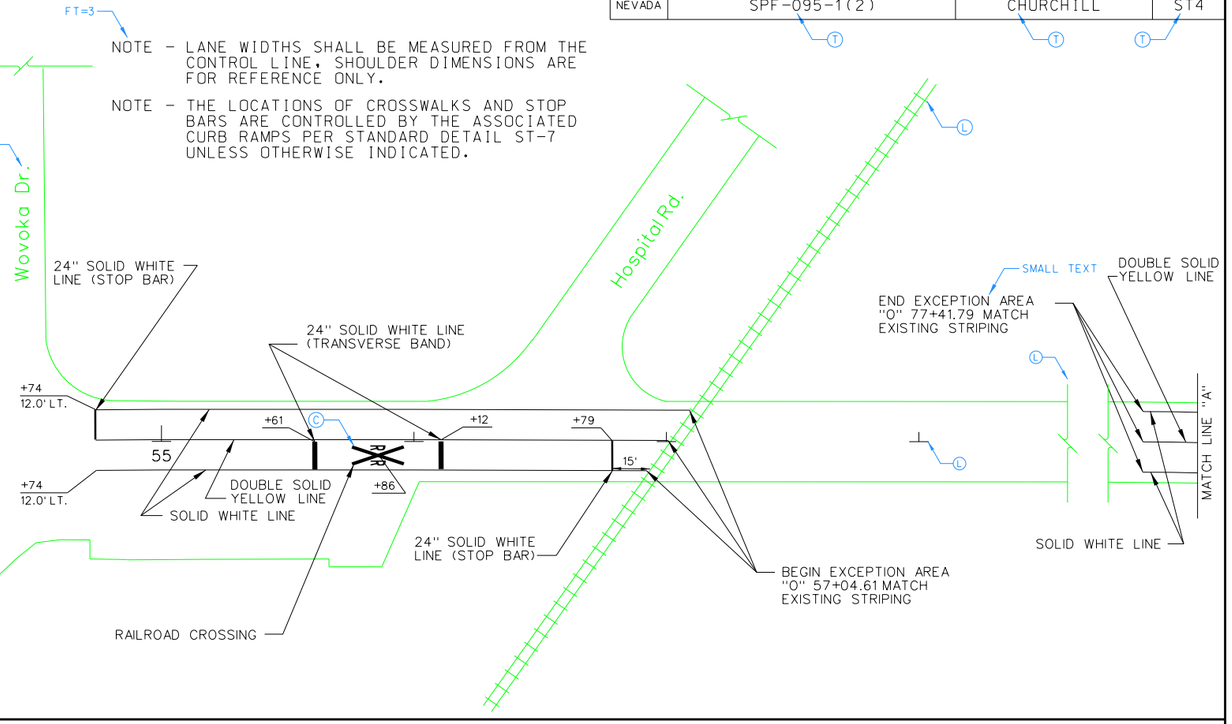
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

FT=3

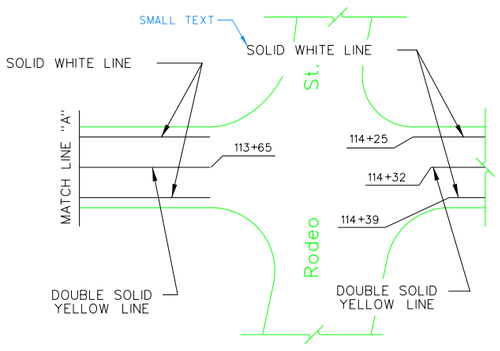
NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.

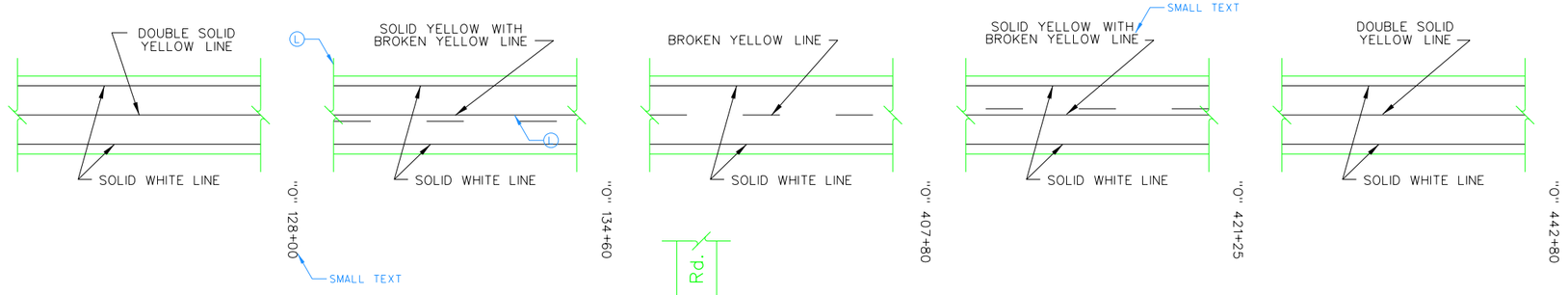
NOTE - THE LOCATIONS OF CROSSWALKS AND STOP BARS ARE CONTROLLED BY THE ASSOCIATED CURB RAMPS PER STANDARD DETAIL ST-7 UNLESS OTHERWISE INDICATED.

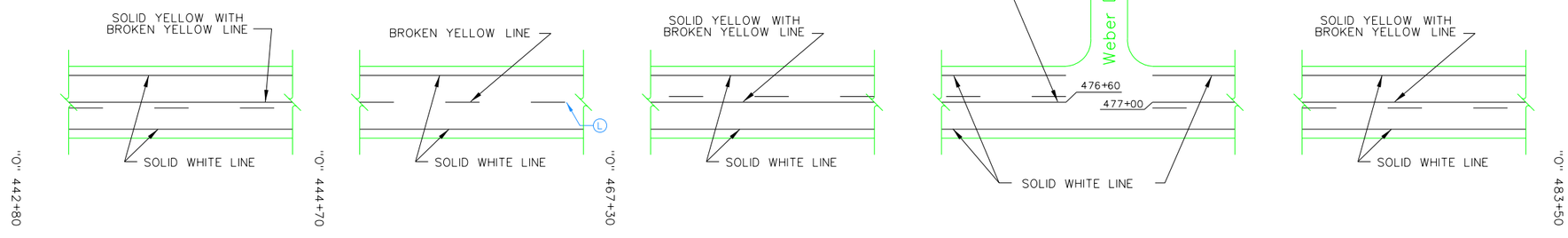




NOTE - LANE WIDTHS ARE 12' TYPICAL AND DIMENSIONED FROM CENTER LINE LT. AND RT. FOR ALL STRIPING







RURAL STRIPING

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

Ⓣ

PERMANENT STRIPING DETAILS

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

Ⓒ - DENOTES CELLS HAVE BEEN USED.

Ⓛ - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

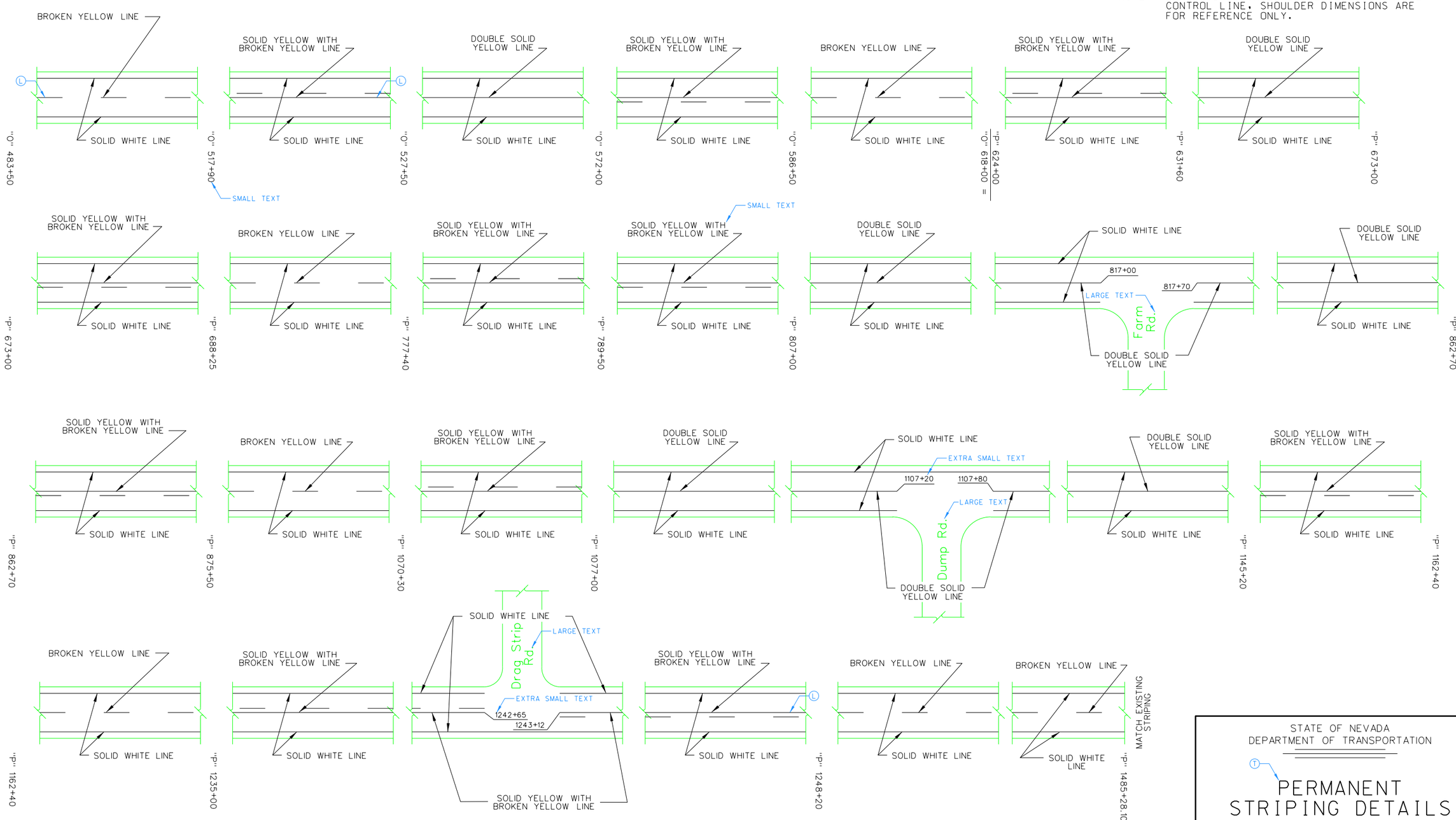
Ⓣ - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-095-1(12)	CHURCHILL	ST5

FT=3

NOTE - LANE WIDTHS ARE 12' TYPICAL AND DIMENSIONED FROM CENTER LINE LT. AND RT. FOR ALL STRIPING

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE. SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.



RURAL STRIPING

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

Ⓣ

PERMANENT STRIPING DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	AC-NH-DE-395-2(034)	CARSON CITY	ST6

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

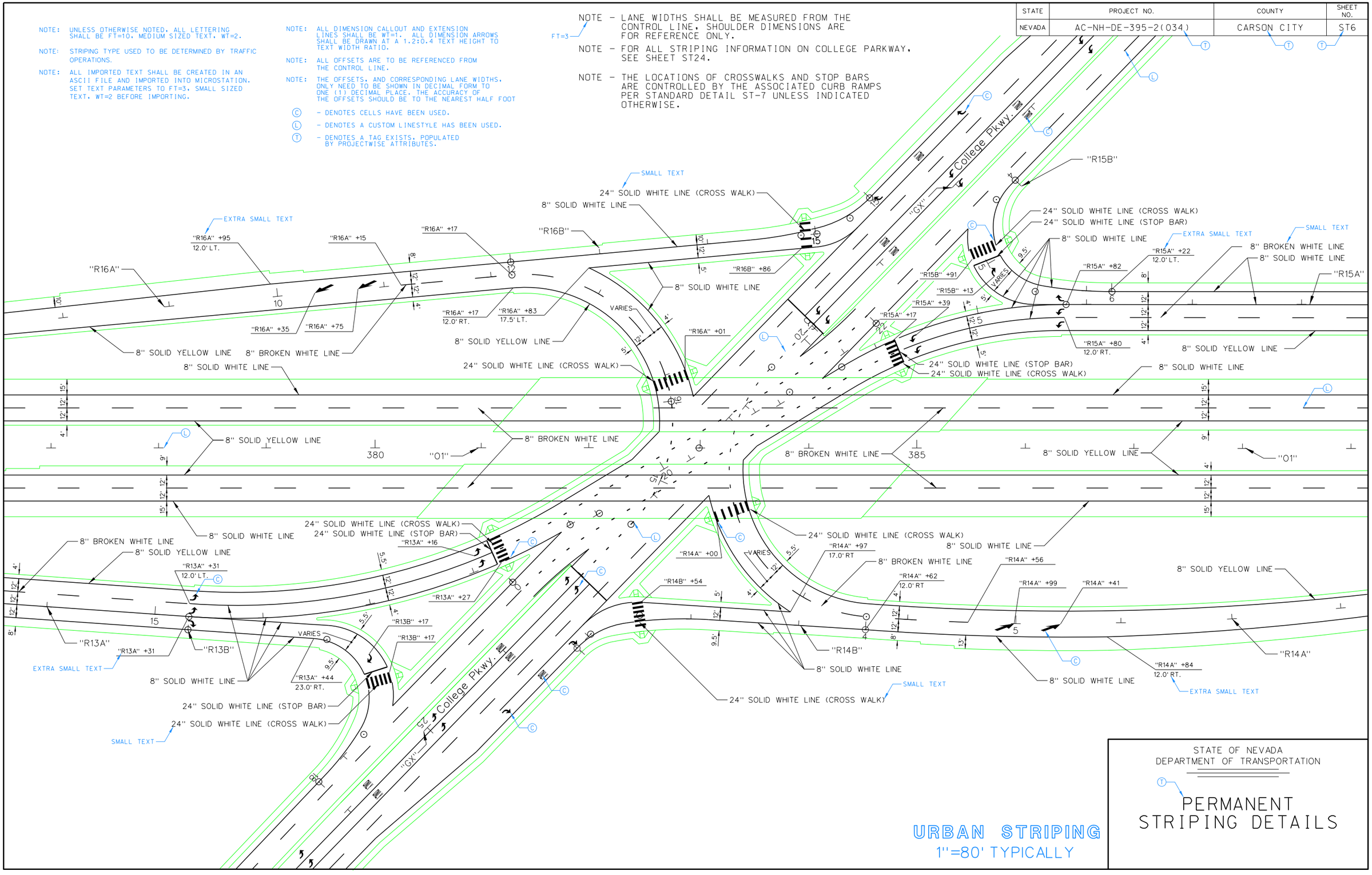
(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

FT=3

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.

NOTE - FOR ALL STRIPING INFORMATION ON COLLEGE PARKWAY, SEE SHEET ST24.

NOTE - THE LOCATIONS OF CROSSWALKS AND STOP BARS ARE CONTROLLED BY THE ASSOCIATED CURB RAMPS PER STANDARD DETAIL ST-7 UNLESS INDICATED OTHERWISE.



URBAN STRIPING
1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

(T)

PERMANENT STRIPING DETAILS

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT.

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

NOTE - * RAISED PAVEMENT MARKERS (RPM's)

NOTE - ARROWS, ONLYS, CROSSWALKS AND STOP BARS SHALL BE THERMOPLASTIC.

NOTE - ALL RAISED PAVEMENT MARKERS SHALL BE PLACED ACCORDING TO NDOT STANDARDS.

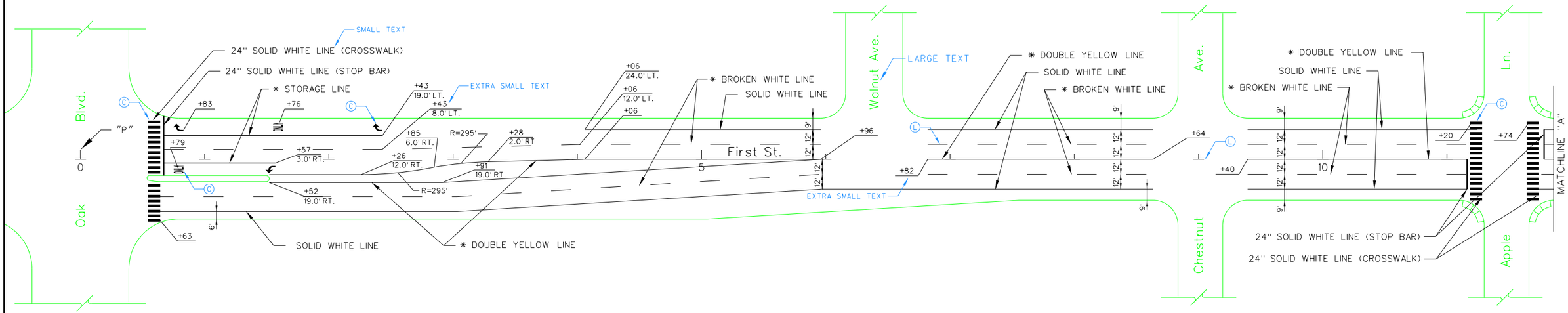
NOTE - ALL BROKEN WHITE LINES SHALL BE PLACED ACCORDING TO NDOT STANDARD DETAIL ST-1 (URBAN)

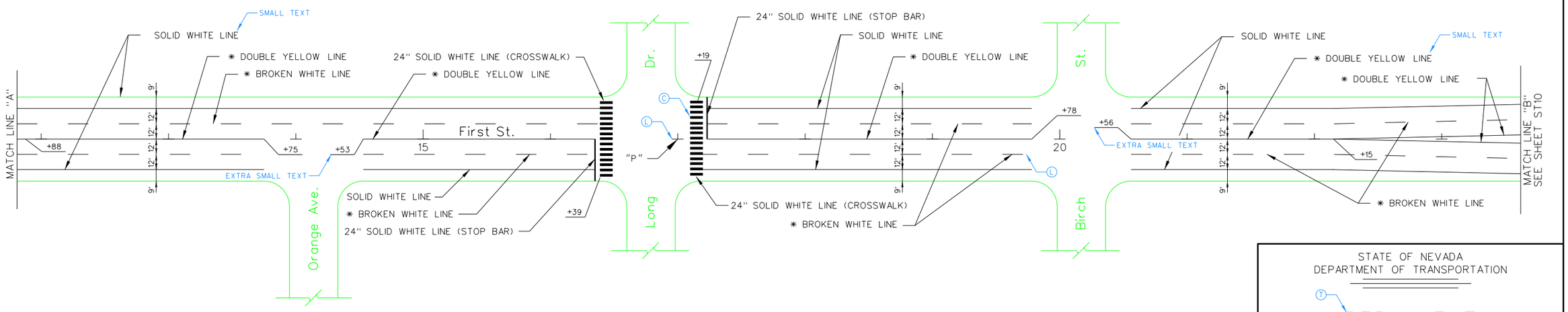
NOTE - THE LOCATIONS OF CROSSWALKS AND STOP BARS ARE CONTROLLED BY THE ASSOCIATED CURB RAMPS PER NDOT STANDARD DETAIL ST-7 UNLESS OTHERWISE INDICATED.

FT=3

NOTE - LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPF-169-1(2)	CLARK	ST7





RAISED PAVEMENT MARKERS

1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

(T)

PERMANENT STRIPING DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	ST8

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: ALL IMPORTED TEXT SHALL BE CREATED IN AN ASCII FILE AND IMPORTED INTO MICROSTATION. SET TEXT PARAMETERS TO FT=3, SMALL SIZED TEXT, WT=2 BEFORE IMPORTING.

NOTE: STRIPING TYPE USED TO BE DETERMINED BY TRAFFIC OPERATIONS.

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.2:0.4 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CONTROL LINE.

NOTE: THE OFFSETS, AND CORRESPONDING LANE WIDTHS, ONLY NEED TO BE SHOWN IN DECIMAL FORM TO ONE (1) DECIMAL PLACE. THE ACCURACY OF THE OFFSETS SHOULD BE TO THE NEAREST HALF FOOT.

(C) - DENOTES CELLS HAVE BEEN USED.

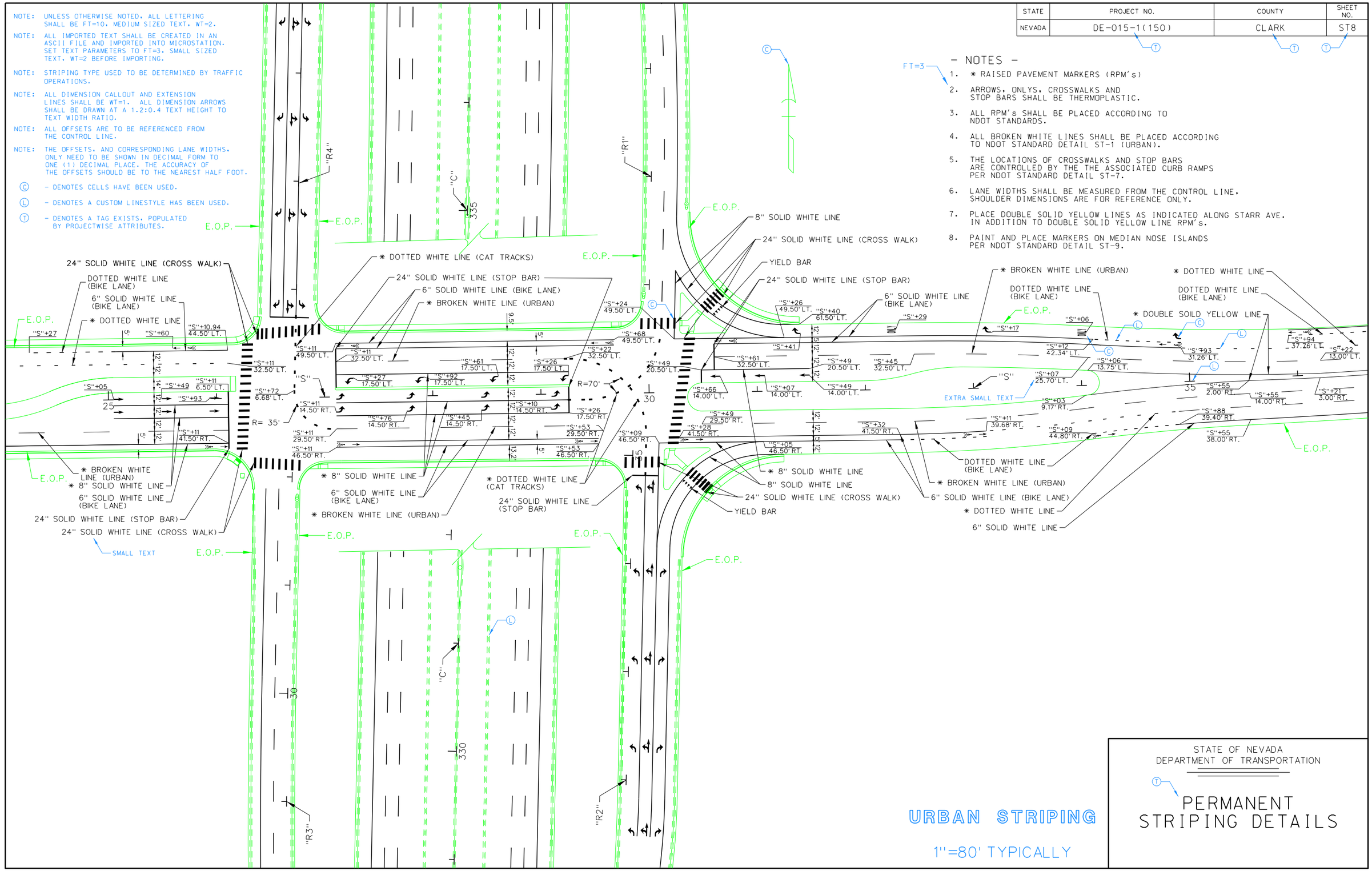
(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

FT=3

- NOTES -

1. * RAISED PAVEMENT MARKERS (RPM's)
2. ARROWS, ONLYS, CROSSWALKS AND STOP BARS SHALL BE THERMOPLASTIC.
3. ALL RPM's SHALL BE PLACED ACCORDING TO NDOT STANDARDS.
4. ALL BROKEN WHITE LINES SHALL BE PLACED ACCORDING TO NDOT STANDARD DETAIL ST-1 (URBAN).
5. THE LOCATIONS OF CROSSWALKS AND STOP BARS ARE CONTROLLED BY THE THE ASSOCIATED CURB RAMPS PER NDOT STANDARD DETAIL ST-7.
6. LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.
7. PLACE DOUBLE SOLID YELLOW LINES AS INDICATED ALONG STARR AVE. IN ADDITION TO DOUBLE SOLID YELLOW LINE RPM's.
8. PAINT AND PLACE MARKERS ON MEDIAN NOSE ISLANDS PER NDOT STANDARD DETAIL ST-9.



URBAN STRIPING

1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

PERMANENT STRIPING DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-095-2(065)	CLARK	ST9

T. 19S. R. 60E.

8" SOLID YELLOW LINE
8" SOLID WHITE LINE
"WN"
"WN" +87 0.0' RT.
"WN" +87 12.5' LT.
* 8" SOLID WHITE LINE (GORE)
* 12" SOLID WHITE LINE (GORE)
8" SOLID WHITE LINE
"OBWB" +08 0.0' RT.
"OBWB" +34 12.0' LT.
"OBWB" +34 0.0' RT.
* 8" SOLID WHITE LINE (GORE)
"OBWB"
"OBWB" +83 0.8' RT.
"OBWB" +53 12.0' LT.
"OBWB" +53 0.0' RT.
"OBWB" +26 12.0' LT.
"SP"
"P1" +66 36.0' LT.
"P1" +65 24.0' LT.
"P1" +63 12.0' LT.
"P1" +62 0.0' LT.
"P1" +81
"P1" +48
"P1" +17
"P1" +87
"P1" +85
"P1" +78
"P1" +59 36.0' LT.
"P1" +59 24.0' LT.
"P1" +59 12.0' LT.
"P1" +43 24.0' LT.
"P1" +27 12.0' LT.
300' R.
"P1"
"P4"
"P4" +76 12.0' LT.
"P4" +94 0.0' RT.
8" SOLID YELLOW LINE
8" SOLID WHITE LINE
* BROKEN WHITE LINE (URBAN)
* 12" SOLID WHITE LINE (GORE)
24" SOLID WHITE LINE (STOP BAR)
"AW" +97 24.0' LT.
"AW" +97 12.0' RT.
"AW"
"AW" +37 36.0' LT.
"AW" +37 0.0' LT.
CC-215
8" SOLID YELLOW LINE
"AE" +00 12.0' LT.
"AE" +00 24.0' RT.
"AE"
* BROKEN WHITE LINE (URBAN)
"AE" +40 24.0' LT.
8" SOLID YELLOW LINE
8" SOLID WHITE LINE
"P3"
"P3" +74 24.0' LT.
"P3" +74 12.0' RT.
"P3" +14.70 0.0' RT.
"P3" +97
"P3" +83
"P3" +68
"P3" +63
"P3" +53
"P3" +54
"P3" +81 24.0' LT.
"P3" +76 12.0' LT.
"P3" +72 0.0' RT.
"P3" +68 12.0' RT.
* 8" SOLID WHITE LINE
8" SOLID WHITE LINE
24" SOLID WHITE LINE (STOP BAR)
* BROKEN WHITE LINE (URBAN)
"P2"
"P2" +03 12.0' RT.
"P2" +24
"P2" +68
"P2" +03 24.0' RT.
"P2" +98 24.0' RT.
"P2" +86 12.0' RT.
"P2" +74 0.0' RT.
8" SOLID YELLOW LINE
"P2" +02 0.0' RT.
"P2" +02 12.0' RT.
8" SOLID WHITE LINE
* BROKEN WHITE LINE (URBAN)
"NE" +00 12.0' LT.
"NE" +00 0.0' RT.
"NE"
"NE" +86 0.0' RT.
"NE" +01 0.0' RT.
"NE" +01 12.0' RT.
"NE" +01 24.0' RT.
12" SOLID WHITE LINE
* DOTTED WHITE LINE
* BROKEN WHITE LINE (URBAN)
"8" SOLID WHITE LINE
* BROKEN WHITE LINE (URBAN)
8" SOLID YELLOW LINE

NOTES:

* - RAISED PAVEMENT MARKERS

- LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.

- ARROWS, ONLYS, CROSSWALKS AND STOPBARS SHALL BE THERMOPLASTIC.

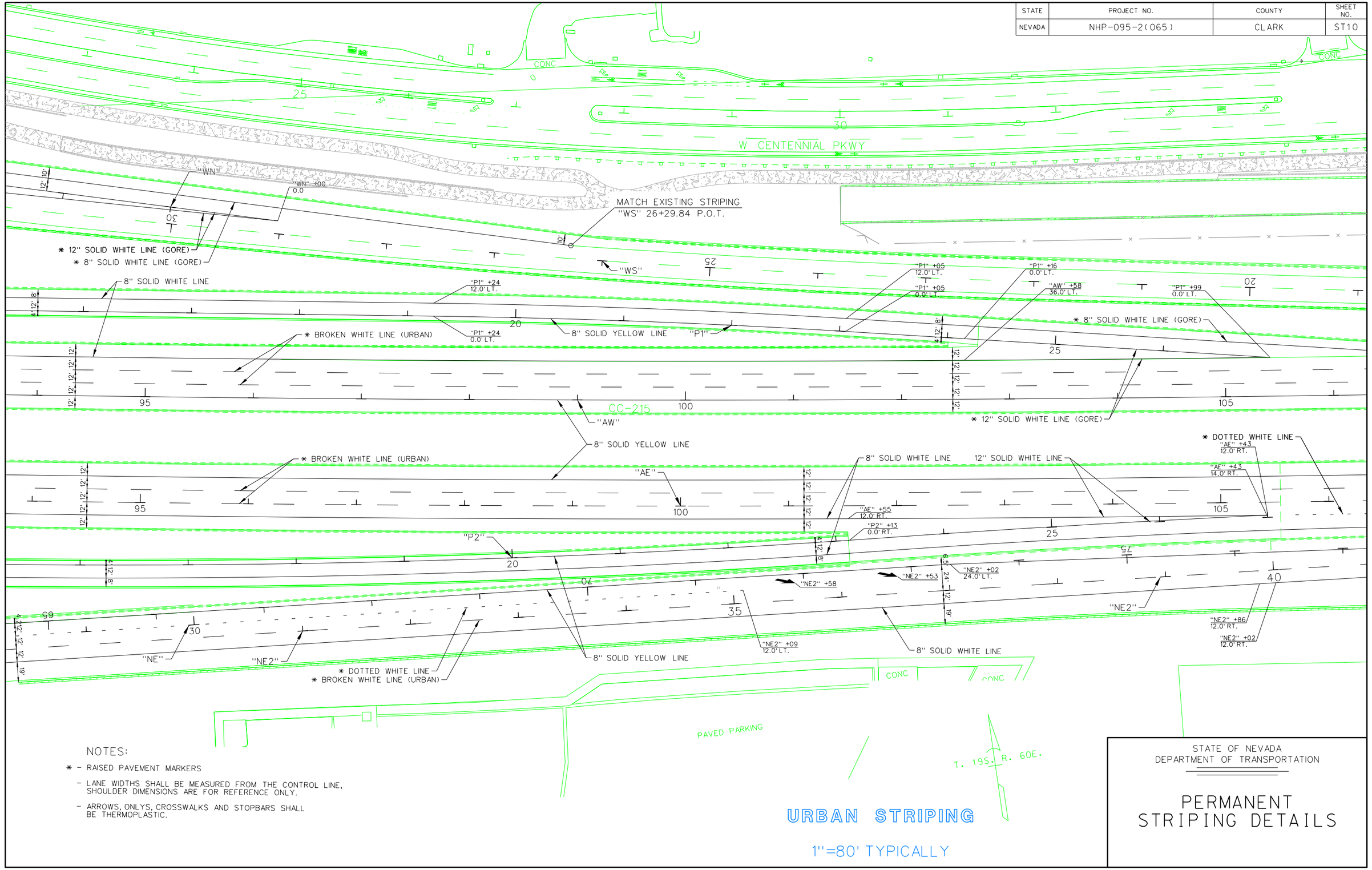
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

PERMANENT STRIPING DETAILS

URBAN STRIPING

1"=80' TYPICALLY

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHP-095-2(065)	CLARK	ST10



NOTES:

* - RAISED PAVEMENT MARKERS

- LANE WIDTHS SHALL BE MEASURED FROM THE CONTROL LINE, SHOULDER DIMENSIONS ARE FOR REFERENCE ONLY.

- ARROWS, ONLYS, CROSSWALKS AND STOPBARS SHALL BE THERMOPLASTIC.

URBAN STRIPING

1"=80' TYPICALLY

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

PERMANENT STRIPING DETAILS

16.0 Traffic Control.

General. The traffic control plans show the sequence of operation, work to be performed, materials to be used, and the traveled way to be used for all movements of traffic during each construction phase.

Traffic Control Guidelines. Traffic control plans should show detours, phasing sequences, staging areas, and traffic operations. The work zones shall be clearly delineated.

Each phase or sequence of construction should show existing roadbeds and those roadbeds completed on a previous phase. Show the construction work zone, number of lanes, and direction of traffic on each respective phase.

Existing roads or detours that have been replaced by permanent construction in previous phases shall not be shown on subsequent phases.

Location control lines, stationing, and station designation shall be shown. Lane widths shall be measured from the control line.

Plans should contain sufficient alignment, profiles, and typical cross sections to construct temporary roadways in the phasing sequence shown. It is not necessary to show profiles and typical cross sections if they are clearly shown elsewhere in the project plans. However, if they are not shown in the traffic control plans, reference should be made to the appropriate sheet.

Show existing infrastructure or topography that is necessary to rationalize the proposed improvements.

Work zones and traffic devices shall be clearly defined with appropriate symbols and area patterning. Legends shall be provided to define area patterning and symbols where appropriate.

If utility installation or relocation work by others is to be coordinated with the contractors operations, such work shall be shown on the plans and designated as work to be done by others. Cross-reference should be made to the utility sheet that applies.

In General, NDOT utilizes 3 types of Temporary Traffic Control (TTC) within its plans:

- Contractor Furnished Lump Sum TTC – plans should be developed to the 60% - 80% level to develop the estimate and show that a TC plan is possible within the restrictions set forth in the Specifications. No sheets will be included in the contract.

- Full TTC Plans – this is a detailed set of plans showing work zones, signs and their locations, and devices, and is to be broken out by phase . A TTC Matrix is also included, showing devices and signs broken out by phase, with a highest use total for each bid item.

- Hybrid TTC – this includes plan sheets showing a diagram of the phases and stages but does not show signs and devices. A TTC Matrix should still be included.

The traffic control sheets shall be arranged in the following order:

- Traffic control device matrix
- Phasing and staging diagram (if applicable)
- Advanced Signing
- Traffic control plans
- Special sign details (if applicable)
- Detour Plans (if applicable)

The traffic control matrix shows the various quantities of materials needed for each phase or stage of the traffic control and is to be included in the plans. The matrix summarizes the totals that will be used on the contract, irrespective of the number of phases and stages on the contract to obtain a use total.

The traffic control plans shall include temporary drainage, temporary signing, temporary striping, pavement widening, and temporary lighting requirements. Modifications of existing traffic signals or installation of temporary signals may be required for each stage of construction. If deemed necessary, electrical plan sheets should be provided to cross-reference the appropriate electrical plans.

Show all traffic control devices, including but not limited to, construction signs, alterations to permanent signs and special sign details, drums and/or cones, barricades, traffic barriers and crash cushions, arrow boards, signal systems and changeable message boards, flagger stations and uniformed traffic control officers, and pavement markings.

Traffic Control Particulars.

1) Sheet numbering for the traffic control sheets shall begin with TC1. Multiple sheets shall be numbered TC1, TC2, TC3, etc.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SI-0028(007)	WASHOE	TC1

TRAFFIC CONTROL SR 431 & SR 28

SIGN NO.	SIGN MESSAGE	PANEL (IN)	X	PANEL (IN)	PANEL AREA (SQFT)	PHASE 1	PHASE 2			PHASE 3			PHASE 4	PHASE 5	MISC	USE TOTAL	SQFT
							STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3					
R1-2	YIELD	36	X	36	9.00					3	3	3	3	3		3	27.00
R2-1B	30 MPH	36	X	48	12.00	3	3	3	3	3	3	3	3	3		3	36.00
W3-4	30 MPH SPEED ZONE AHEAD	36	X	36	9.00	3	3	3	3	3	3	3	3	3		3	27.00
W20-1	ROAD WORK AHEAD	36	X	36	9.00	7	7	7	7	7	7	7	7	7		7	63.00
W20-5R	ONE LANE ROAD AHEAD	36	X	36	9.00		3	3	3	1	3		3			3	27.00
W20-7A	FLAGGER SYMBOL	36	X	36	9.00	2	4	4	4	4	4	4	4	4		4	36.00
W21-5	SHOULDER WORK	36	X	36	9.00	3	3			2		3		3		3	27.00
W23-2	NEW TRAFFIC PATTERN AHEAD	36	X	36	9.00					3	3	3	3	3		3	27.00
WNV16-2	BEGIN WORK ZONE	48	X	24	8.00	3	3	3	3	3	3	3	3	3		3	24.00
WNV16-3	END WORK ZONE	48	X	24	8.00	3	3	3	3	3	3	3	3	3		3	24.00
WNV16-4	30 MINUTE DELAY POSSIBLE	48	X	36	12.00	3	3	3	3	3	3	3	3	3		3	36.00
WNV17-1	DOUBLE PENALTY IN WORK ZONE	36	X	36	9.00	3	3	3	3	3	3	3	3	3		3	27.00
WNV29-1	PREPARE TO STOP	36	X	36	9.00	3	3	3	3	3	3	3	3	3		3	27.00
															SUB TOTAL:		408.00

BICYCLE DETOUR (TO BE INPLACE DURING ALL PHASES AND STAGES OF CONTRUCTION, SEE TC1B FOR LAYOUT)

SIGN NO.	SIGN MESSAGE	PANEL (IN)	X	PANEL (IN)	PANEL AREA (SQFT)	PHASE 1	PHASE 2			PHASE 3			PHASE 4	PHASE 5	MISC	USE TOTAL	SQFT
							STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3					
M4-8B	END	24	X	12	2.00	6	6	6	6	6	6	6	6	6		6	12.00
M4-9CL	BICYCLES DETOUR LEFT	30	X	24	5.00	13	13	13	13	13	13	13	13	13		13	65.00
M4-9CR	BICYCLES DETOUR RIGHT	30	X	24	5.00	14	14	14	14	14	14	14	14	14		14	70.00
SPCL	BICYCLES DETOUR AHEAD (SEE TC1B FOR SPECS.)	36	X	36	9.00	3	3	3	3	3	3	3	3	3		3	27.00
SPCL	BICYCLES DETOUR INCLINE VILLAGE, TAHOE CITY & RENO (SEE TC1B FOR SPECS.)	36 36	X	48 42	12 10.5	3	3	3	3	3	3	3	3	3		3	33.00
															SUB TOTAL:		207.00

TOTAL FROM TRAFFIC CONTROL & BICYCLE DETOUR: 615.00
USE TOTAL: 620.00

BID ITEM	DESCRIPTION	UNIT	PHASE 1	PHASE 2			PHASE 3			PHASE 4	PHASE 5	MISC	USE TOTAL
				STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3				
625 0130	RENT CONSTRUCTION BARRICADES (TYPE IIIB)	EACH				3							3
625 0140	RENT TRAFFIC CONES	EACH	100	100	130	110	75	75	0	85	30		150
625 0230	RENT CHANGEABLE MESSAGE SIGN	EACH	3	3	3	3	3	3	3	3	3		3
625 0260	RENT ARROW BOARD (TYPE B)	EACH	3	3	3	3	3	3	3	3	3		3
625 0540	RENT WATER FILLED BARRIER	LINFT	1700				1000	1000	400				1700
636 0180	TEMPORARY PAINTED STRIPING (SOLID WHITE)	LINFT					4450						4450
636 0220	TEMPORARY PAINTED STRIPING (12-INCH SOLID WHITE)	LINFT				24							24
636 0250	TEMPORARY PAINTED STRIPING (SOLID YELLOW)	LINFT					1350						1350
636 0310	TEMPORARY PAINTED STRIPING (DOUBLE SOLID YELLOW)	LINFT					1800		650				2450

TRAFFIC CONTROL PAGE LAYOUT (SEE TC1A FOR PAGE LAYOUT)

STATIONS	STATE ROUTE	PHASE 1	PHASE 2			PHASE 3			PHASE 4	PHASE 5
			STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3		
"P" 148+72 -"P" 161+70 & "P" 204+40 - "P" 218+00	28	TC2	TC2			TC2			TC18	TC21
"P" 161+70 -"P" 176+00 & "P" 189+66 - "P" 204+40	28	TC3	TC6		TC10	TC12	TC14	TC16	TC19	TC22
"P" 176+00 -"P" 189+66 & "L1" 10+00 - "L1" 23+15	28 / 431	TC4	TC7	TC9	TC11	TC13	TC15	TC17	TC20	TC23
"L1" 23+15 - "L1" 51+00	431	TC5	TC8			TC5	TC8	TC5	TC8	TC5

NOTES:

1. QUANTITIES SHOWN ARE APPROXIMATE AND ARE SUBJECT TO INCREASE OR DECREASE. ADDITIONAL SIGNS, NOT LISTED, MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
2. FOR DETAILS AND DIMENSIONS NOT SHOWN SEE STATE OF NEVADA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION 20XX ENGLISH VERSION AND NEVADA SIGN SUPLEMENT 20XX EDITION.
3. TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE REQUIREMENTS OF THE M.U.T.C.D. 20XX AND NEVADA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION 20XX ENGLISH VERSION.

NOTES TO DESIGNER

1) DO YOU NEED TC OPERATION FOR PLACEMENT OF OPEN GRADE.

2) TOTAL NUMBER OF TC DEVICES IS BASED ON CONCURRENT WORK AND MISC. TRAFFIC CONTROL DEVICES (LIST UNDER NOTES).

3) THIS FORMAT MAY BE ALTERED TO FIT PROJECT NEEDS.

4) INCLUDE TEMPORARY STRIPING WHEN IT IS TO BE PAID FOR.

5) USE THE PHASE #/ STAGE # NAMING CONVENTION.

6) EXPLAIN QUANTITIES IN THE MISC. COLUMN.

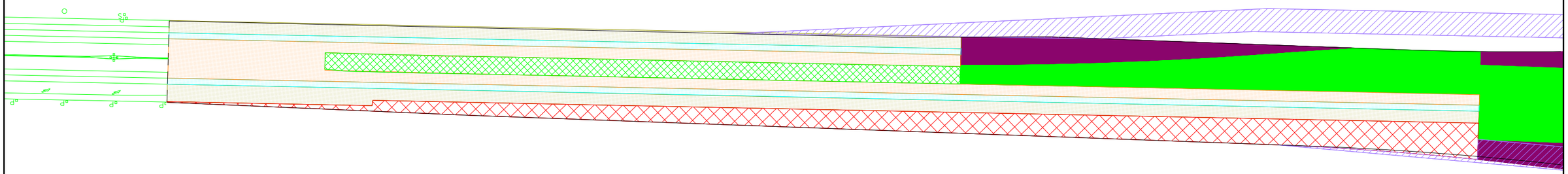
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL MATRIX

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	TC2

- LEGEND -

- PHASE 1: Median Paving
- PHASE 2: Trench/Widen Outside Shoulders
- PHASE 2A: Detour Construction
- PHASE 3: 3 3/4" Mill & Fill on #3 Lanes + Outside Shoulders
- PHASE 3A: 3 3/4" Mill & Fill on #2 Lanes
- PHASE 3B: 3 3/4" Mill & fill on #1 Lanes + Inside Shoulders
- PHASE 4: Bridge Construction + Mainline Profiling
- PHASE 5: Ramps Construction



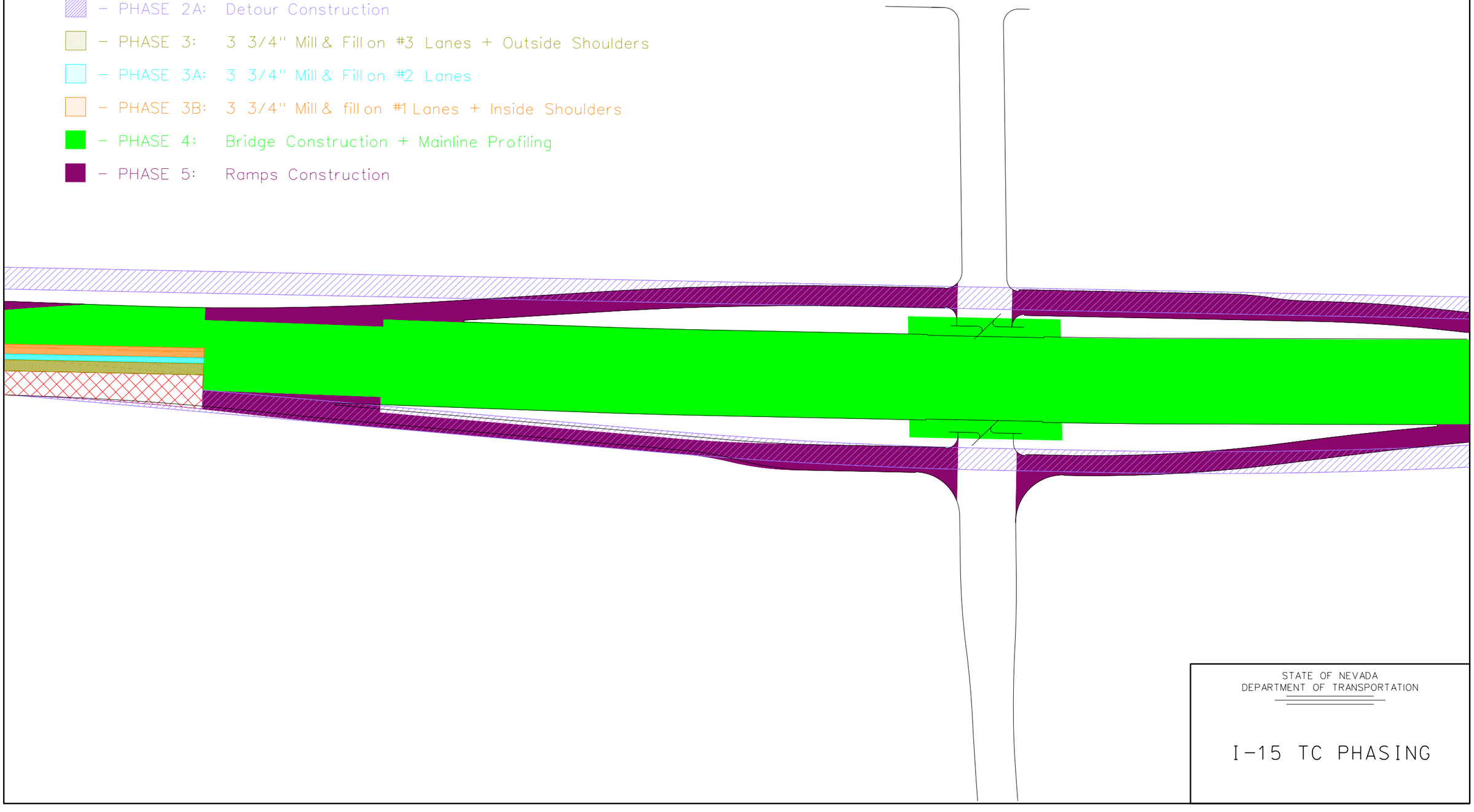
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

I-15 TC PHASING

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-015-1(150)	CLARK	TC3

- LEGEND -

- PHASE 1: Median Paving
- PHASE 2: Trench/Widen Outside Shoulders
- PHASE 2A: Detour Construction
- PHASE 3: 3 3/4" Mill & Fill on #3 Lanes + Outside Shoulders
- PHASE 3A: 3 3/4" Mill & Fill on #2 Lanes
- PHASE 3B: 3 3/4" Mill & fill on #1 Lanes + Inside Shoulders
- PHASE 4: Bridge Construction + Mainline Profiling
- PHASE 5: Ramps Construction



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

I-15 TC PHASING

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-1(076)12	DOUGLAS	TC4

- LEGEND -

- TRAFFIC DRUMS @ 65' SPACING
- TEMPORARY IMPACT ATTENUATOR (65 mph)
- TEMPORARY PORTABLE PRECAST CONCRETE BARRIER RAIL
- WORK ZONE
- ARROW BOARD TYPE C

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: DRAFTED TRAFFIC CONTROL SHEETS START AT TC2 (TC1 IS RESERVED FOR TRAFFIC CONTROL MATRIX)

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: THE ACTIVE LEVEL MUST BE SET MANUALLY FOR ALL TRAFFIC CONTROL CELLS, DIMENSIONING ETC. THE ACTIVE LEVEL MUST CORRESPOND TO THE PHASE AND STAGE.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CENTERLINE OR WHATEVER LINE OF STATIONING IS USED WHICH WILL REQUIRE A STATION "PLUS" ALONG WITH APPROPRIATE OFFSET WIDTH.

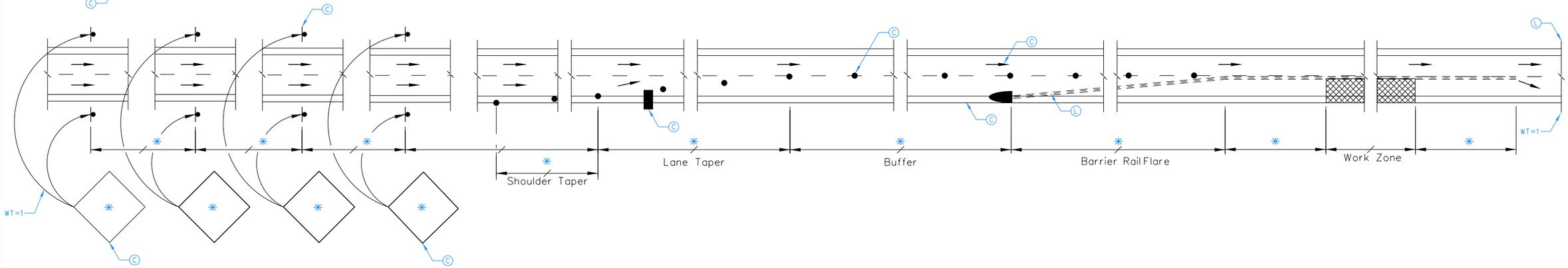
(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

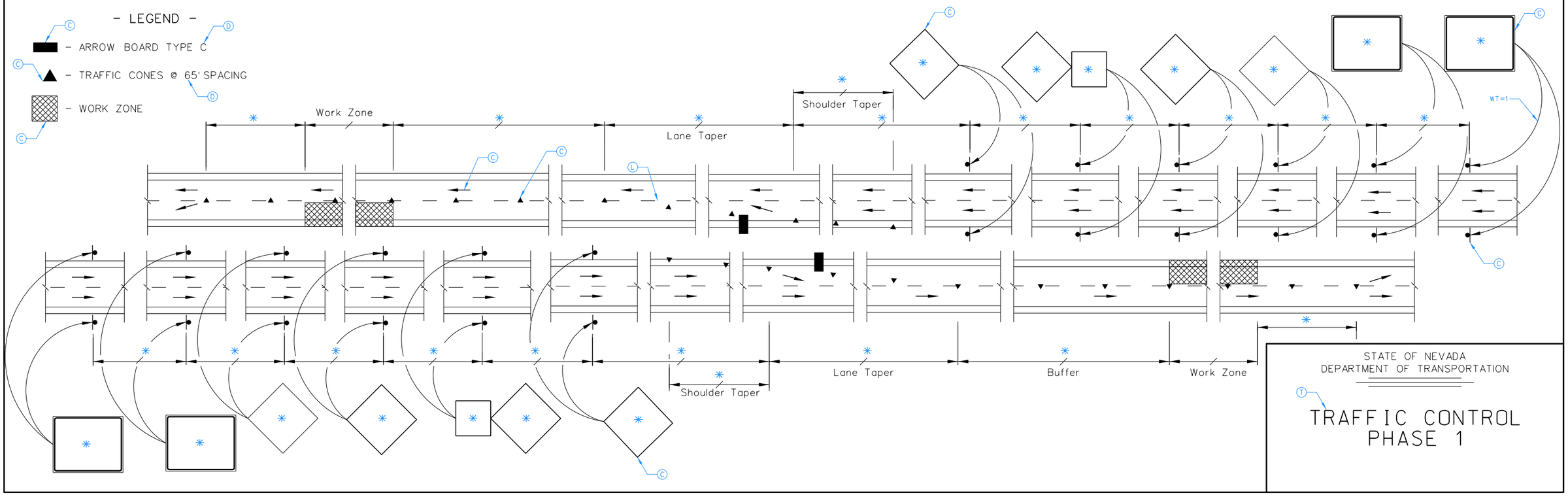
(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

* - REFER TO STANDARD PLANS FOR SIGN USAGE AND SPACING



- LEGEND -

- ARROW BOARD TYPE C
- TRAFFIC CONES @ 65' SPACING
- WORK ZONE



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PHASE 1

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-080-1(114)9	ELKO	TC5

- LEGEND -

- WORK ZONE
- TRAFFIC DRUMS @ 10' SPACING
- FLAGGER (LOCATION TO BE DETERMINED BY FIELD ENGINEER)

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: DRAFTED TRAFFIC CONTROL SHEETS START AT TC2 (TC1 IS RESERVED FOR TRAFFIC CONTROL MATRIX)

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CENTERLINE OR WHATEVER LINE OF STATIONING IS USED WHICH WILL REQUIRE A STATION "PLUS" ALONG WITH APPROPRIATE OFFSET WIDTH.

NOTE: THE ACTIVE LEVEL MUST BE SET MANUALLY FOR ALL TRAFFIC CONTROL CELLS. DIMENSIONING ETC. THE ACTIVE LEVEL MUST CORRESPOND TO THE PHASE AND STAGE.

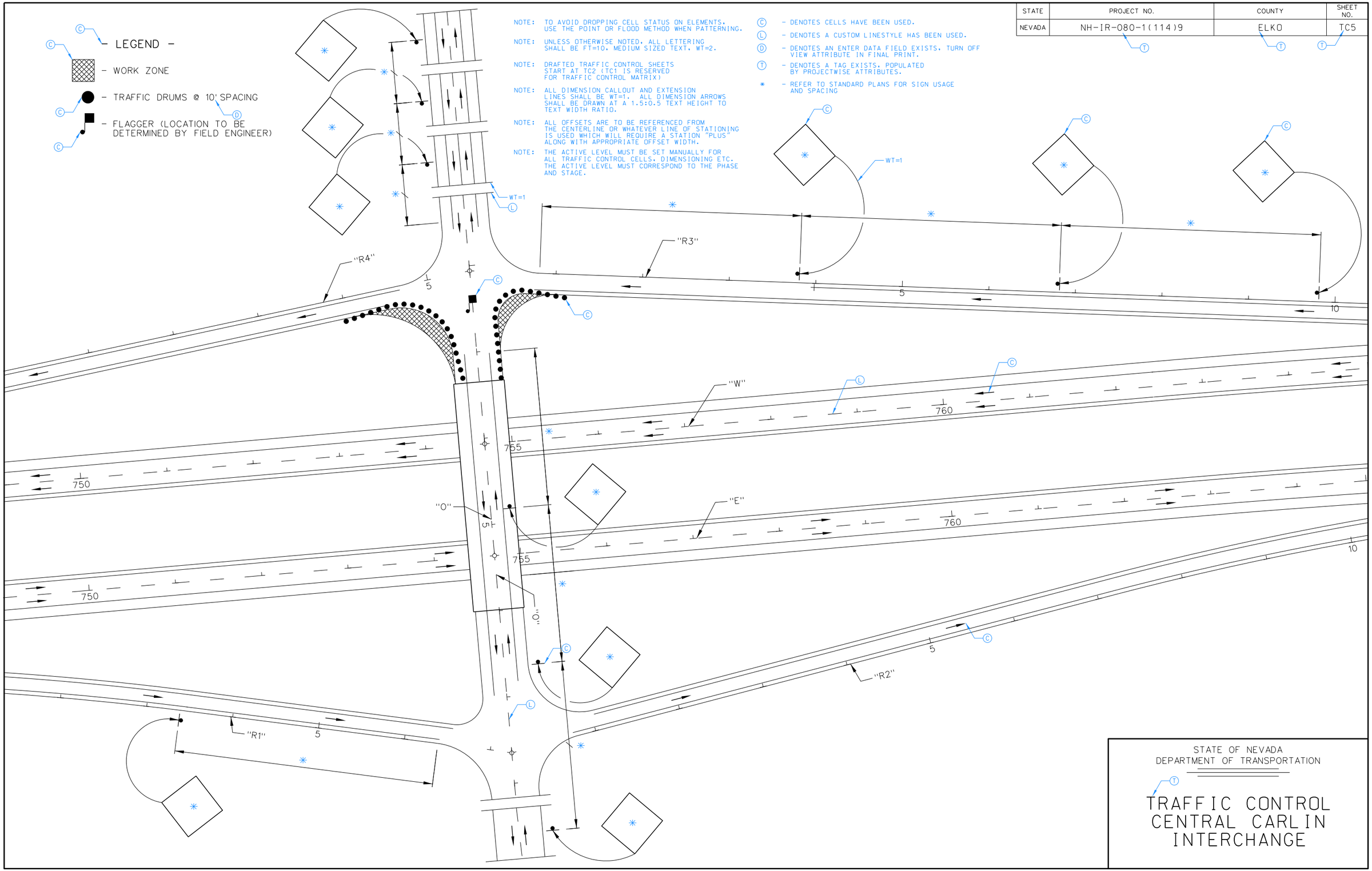
(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

* - REFER TO STANDARD PLANS FOR SIGN USAGE AND SPACING



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL CENTRAL CARLIN INTERCHANGE

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-08-1(114)9	ELKO	TC6

- LEGEND -

- WORK ZONE
- TRAFFIC DRUMS @ 55' SPACING
- ARROW BOARD TYPE C

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: DRAFTED TRAFFIC CONTROL SHEETS START AT TC2 (TC1 IS RESERVED FOR TRAFFIC CONTROL MATRIX)

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: THE ACTIVE LEVEL MUST BE SET MANUALLY FOR ALL TRAFFIC CONTROL CELLS, DIMENSIONING ETC. THE ACTIVE LEVEL MUST CORRESPOND TO THE PHASE AND STAGE.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CENTERLINE OR WHATEVER LINE OF STATIONING IS USED WHICH WILL REQUIRE A STATION "PLUS" ALONG WITH APPROPRIATE OFFSET WIDTH.

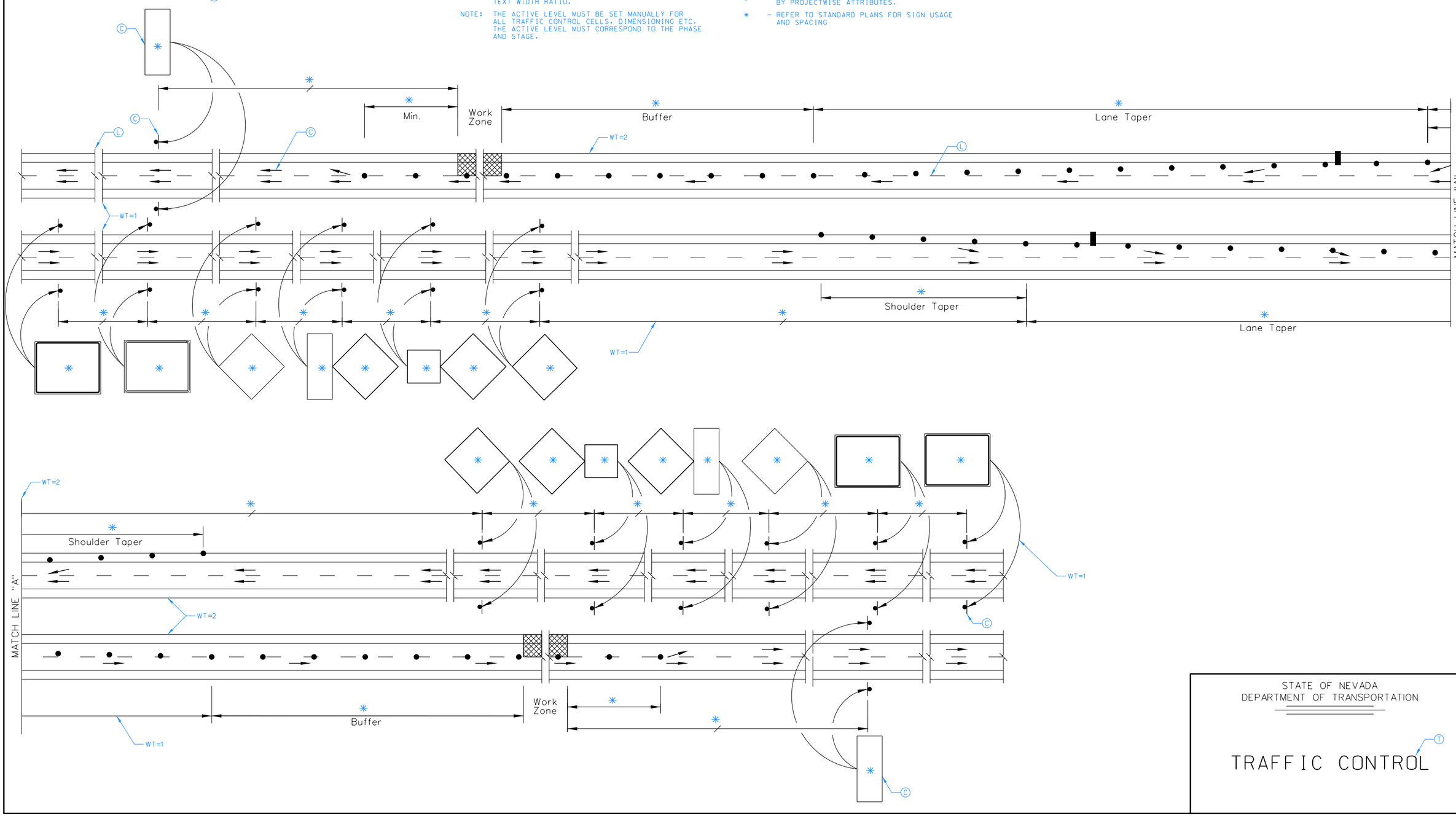
(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

* - REFER TO STANDARD PLANS FOR SIGN USAGE AND SPACING



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-080-1(114)9	ELKO	TC7

- LEGEND -

- WORK ZONE
- TRAFFIC DRUMS @ 55' SPACING
- ARROW BOARD TYPE C
- TEMPORARY PORTABLE PRECAST CONCRETE BARRIER RAIL
- TEMPORARY IMPACT ATTENUATOR (45 mph)

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: DRAFTED TRAFFIC CONTROL SHEETS START AT TC-2 (TC-1 IS RESERVED FOR TRAFFIC CONTROL MATRIX)

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: THE ACTIVE LEVEL MUST BE SET MANUALLY FOR ALL TRAFFIC CONTROL CELLS. DIMENSIONING ETC. THE ACTIVE LEVEL MUST CORRESPOND TO THE PHASE AND STAGE.

NOTE: ALL OFFSETS ARE TO BE REFERENCED FROM THE CENTERLINE OR WHATEVER LINE OF STATIONING IS USED WHICH WILL REQUIRE A STATION "PLUS" ALONG WITH APPROPRIATE OFFSET WIDTH.

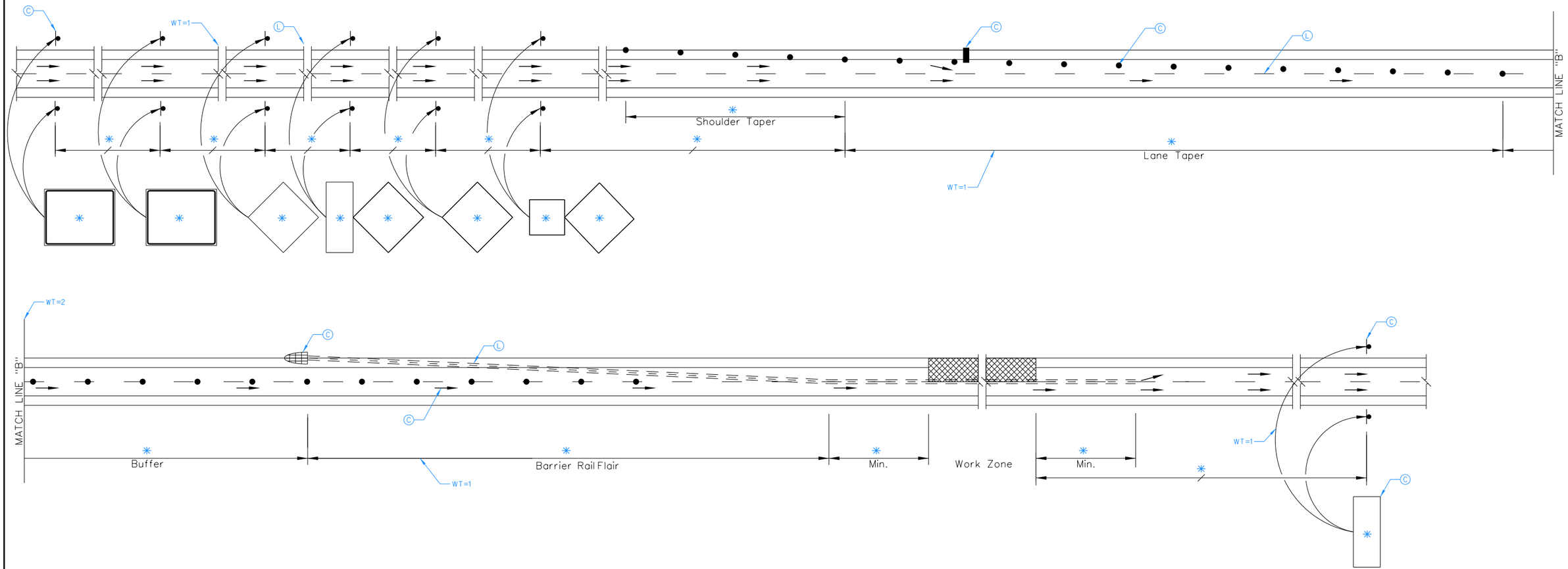
(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.

* - REFER TO STANDARD PLANS FOR SIGN USAGE AND SPACING



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-IR-080-1(114)9	ELKO	TC8

- LEGEND -

- BARRICADE TYPE III B
- TRAFFIC DRUMS @ 65' SPACING
- WORK ZONE

NOTE: TO AVOID DROPPING CELL STATUS ON ELEMENTS, USE THE POINT OR FLOOD METHOD WHEN PATTERNING.

NOTE: UNLESS OTHERWISE NOTED, ALL LETTERING SHALL BE FT=10, MEDIUM SIZED TEXT, WT=2.

NOTE: DRAFTED TRAFFIC CONTROL SHEETS START AT TC2 (TC1 IS RESERVED FOR TRAFFIC CONTROL MATRIX)

NOTE: ALL DIMENSION CALLOUT AND EXTENSION LINES SHALL BE WT=1. ALL DIMENSION ARROWS SHALL BE DRAWN AT A 1.5:0.5 TEXT HEIGHT TO TEXT WIDTH RATIO.

NOTE: THE ACTIVE LEVEL MUST BE SET MANUALLY FOR ALL TRAFFIC CONTROL CELLS, DIMENSIONING ETC. THE ACTIVE LEVEL MUST CORRESPOND TO THE PHASE AND STAGE.

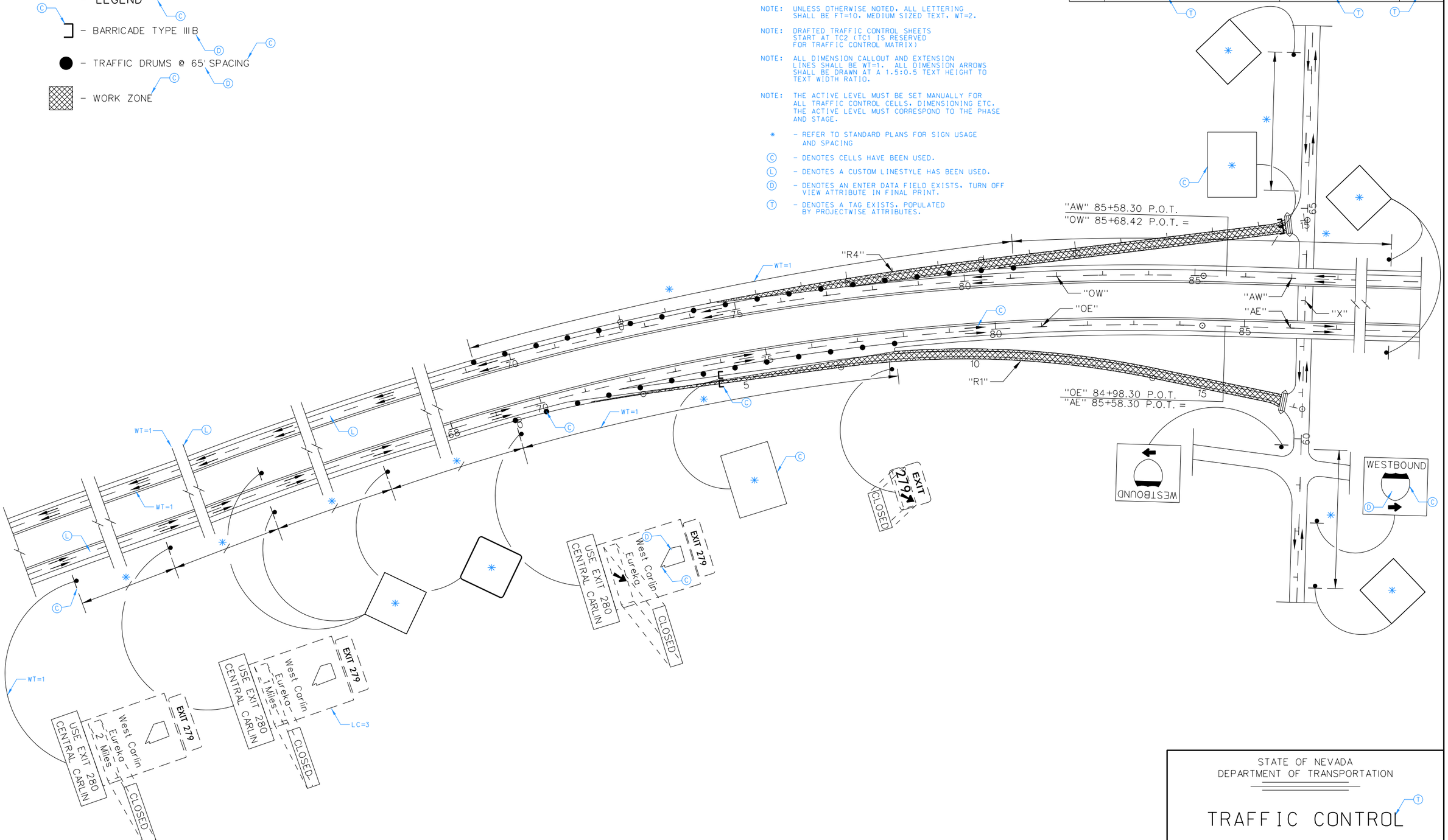
* - REFER TO STANDARD PLANS FOR SIGN USAGE AND SPACING

(C) - DENOTES CELLS HAVE BEEN USED.

(L) - DENOTES A CUSTOM LINESTYLE HAS BEEN USED.

(D) - DENOTES AN ENTER DATA FIELD EXISTS, TURN OFF VIEW ATTRIBUTE IN FINAL PRINT.

(T) - DENOTES A TAG EXISTS, POPULATED BY PROJECTWISE ATTRIBUTES.



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

17.0 Signal, Lighting, and Intelligent Transportation Systems (ITS).

General. The signal, lighting, and ITS sheets show the necessary details for constructing the associated proposed public traffic information systems, signal and lighting systems. This work normally consists of systems requiring energizing and/or special communication and data connections.

Signal, Lighting, and Intelligent Transportation Systems Guidelines. The Signal, Lighting, and ITS section of the Traffic Operations Division or the local agency supplies signal and lighting sheets. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans.

The information provided to the traffic designer will show the locations of all new and existing features such as geometrics, right-of-way, drainage, and bridges so that these features can be taken into account in the signal, lighting, and ITS design.

Refer to the current NDOT Signal, Lighting, and ITS Design Guide for additional details and example sheets. The guide can be found at https://www.nevadadot.com/home/showpublisheddocument?id=17155.

Signal, Lighting, and Intelligent Transportation Systems Particulars.

1) Sheet numbering for the signals, lighting, and ITS typically begin with T1 with multiple sheets numbered T1, T2, T3, etc. For larger projects, sheets labeled with LT and ITS may also be used. Refer to the NDOT Signal, Lighting, and ITS Design Guide for further information about sheet numbering.

18.0 Permanent Signing.

General. The purpose of the sign sheets is to convey information necessary to locate, remove, reset, and install signing that is used as the primary mechanism for regulating, warning and guiding traffic.

Permanent Signing Guidelines. The Signs, Striping and Traffic Control section of the Traffic Operations Division prepares sign sheets showing the necessary information for the removal of existing signs, new sign locations, special details, sign panel and overhead sign structure details, milepost panel locations, general notes and sign quantities. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans. Contact the Signs, Striping, and Traffic Control Engineer for additional guidelines not shown in this guide.

Permanent Signing Particulars. The sign plan layout shall generally be arranged in the same order as the roadway plan sheets. The use of match lines or break lines can be used as appropriate. All sign plan sheets should show location control lines, stationing, and station designations should be shown in black.

Sign removal sheets should include existing features such as edge of pavement, right of way (when practical), north arrows, and street names shown in green. Existing striping should be shown in green, when possible. Existing signs to be removed or reset should be shown in black and should indicate the location with the corresponding sign symbol and be labeled using page number followed by the sign number and the letter R. Signs that will not be disturbed should be shown in green and labeled with a “D” in place of the sign number.

Sign location sheets should include the same existing features shown on the removal sheets shown in green. New features such as new edge of pavement for widening, guardrail, barrier rail, and new striping should be shown in black. New sign locations should be shown in black and should indicate the location with the corresponding sign symbol and be labeled using page number and followed by the sign number. Signs that will not be disturbed should be shown in green and labeled with a “D” in place of the sign number.

Only features that affect construction and are essential for field orientation of the plan should be shown. Topography should be confined to that portion within the right-of-way and a small portion outside of those limits as needed for clarity, such as side streets, approaches, parking lots, etc.

Common features that may be shown as applicable include; buildings, roads, streets, railroads, rivers, streams, utilities, trees, curbs, gutters, sidewalks, etc. In the event that relocation or disposition of these items is included in the project, the plan should show the present and proposed location.

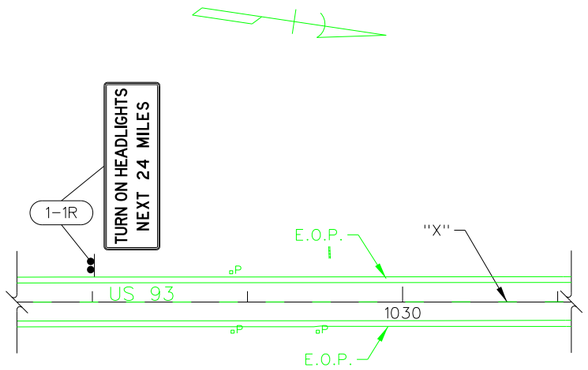
Sign sheets should be oriented so that stationing progresses from left to right. When stationing runs in the opposite direction from the mileposts, the plans should read in the direction of the stationing.

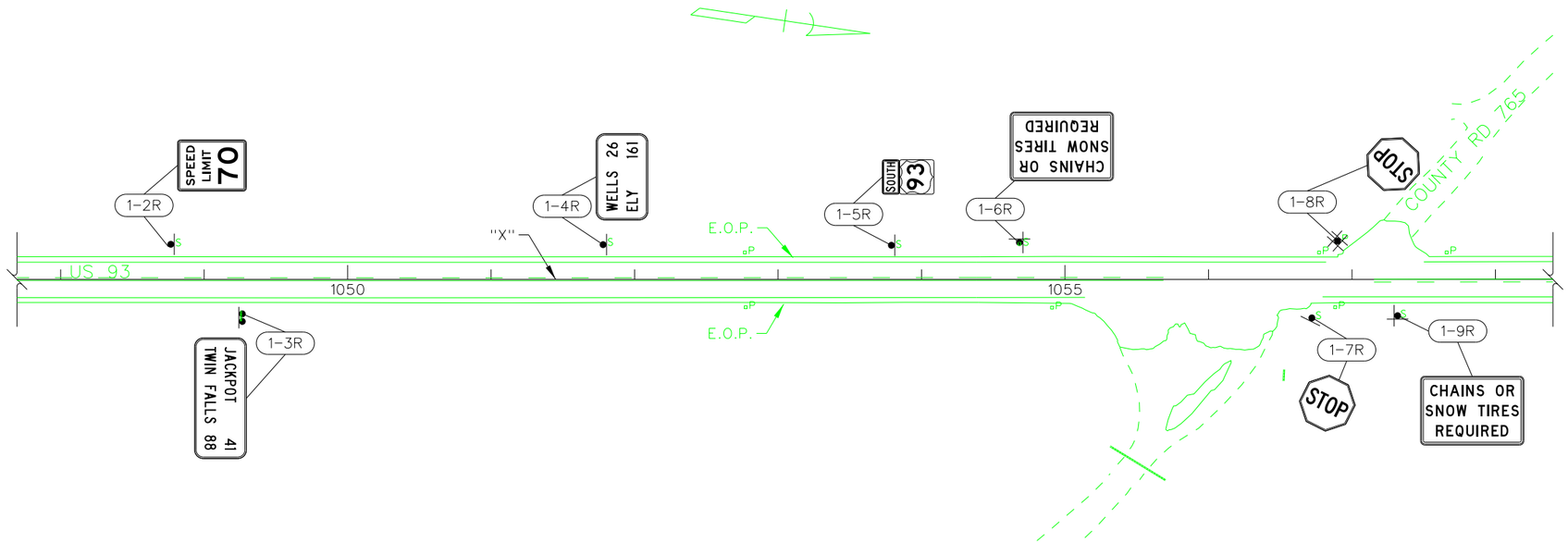
Selection of a scale should be adequate to show all the necessary details as governed by the topography and the complexity of the work. Generally, the plan views should be printed to a scale of one-inch equals 100 feet (1” = 100’), although certain cases may require a larger or smaller scale.

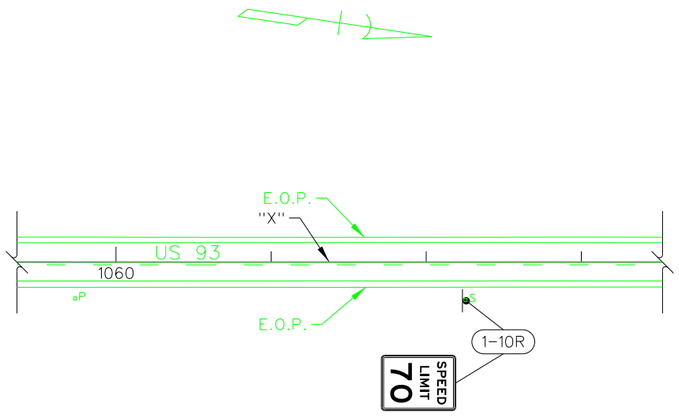
Sheet numbering The sign sheets should be numbered beginning with TS1-TSXX and ordered as follows:

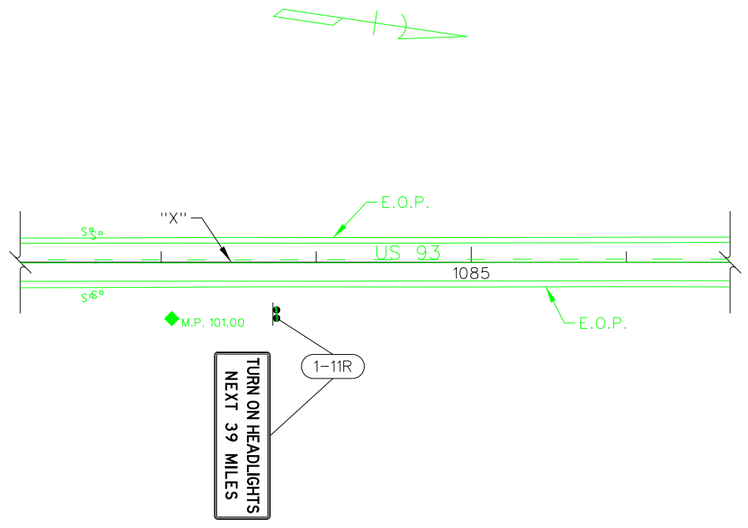
1. Sign Removals
2. Sign Locations
3. Sign Panel Details
4. Overhead Structure Details (if applicable to the project)
5. Special Details (if applicable to the project)
6. Milepost Index
7. Sign General Notes
8. Sign Summary

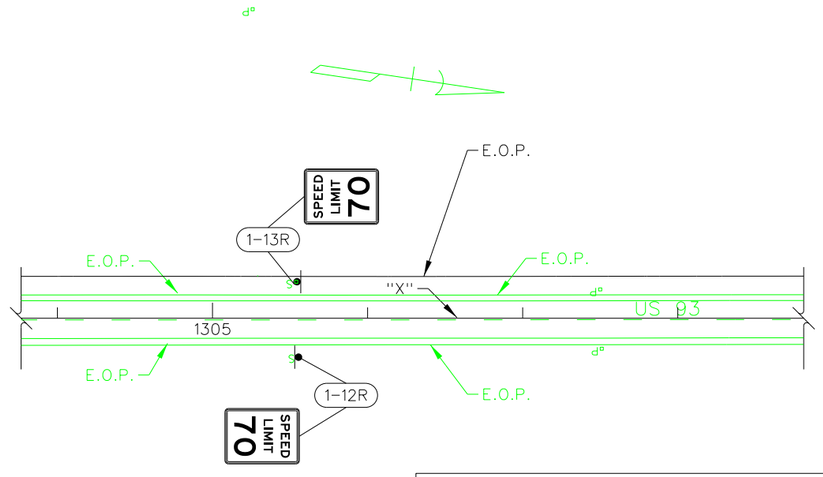
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS1











DESIGN DIVISION		
DESIGNER	ERIC HARMER	PHONE (775) 888-7446
SENIOR DESIGNER	JAMIE FULLER-DUNN	PHONE (775) 888-7992
PROJECT MANAGER		PHONE

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN REMOVALS

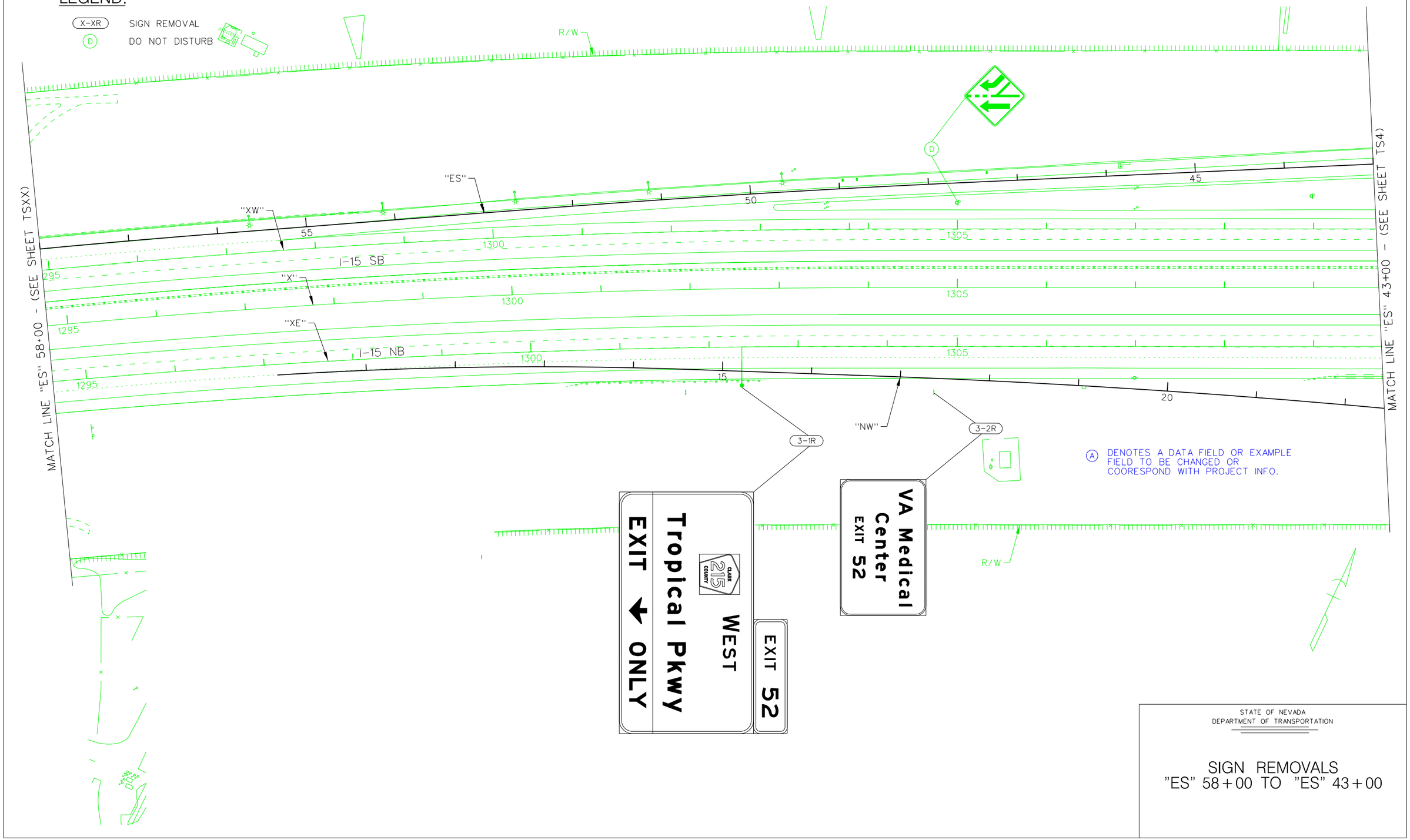
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS3

(A) (A) (A)

LEGEND:

X-XR SIGN REMOVAL

(D) DO NOT DISTURB



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN REMOVALS
"ES" 58+00 TO "ES" 43+00

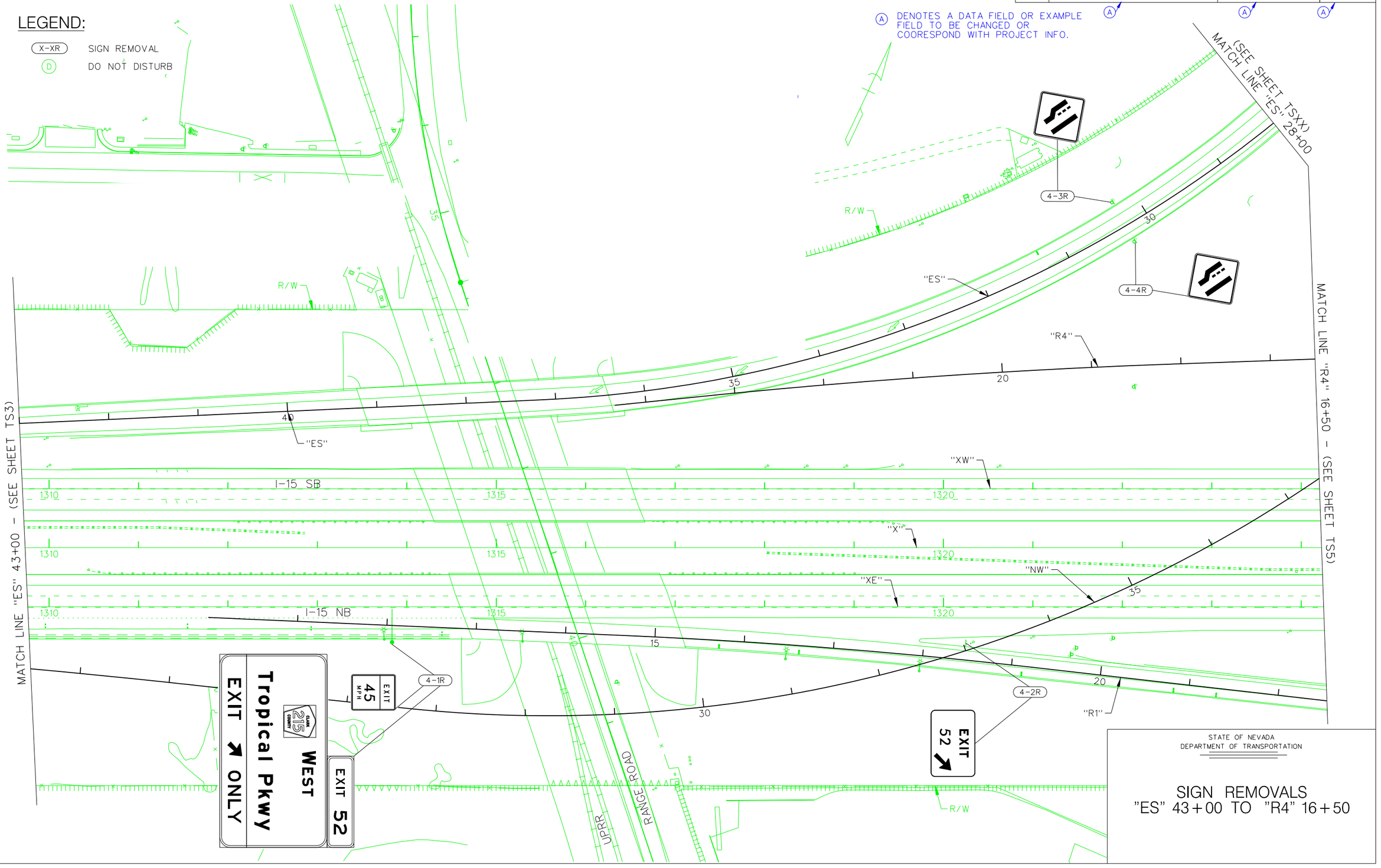
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS4

LEGEND:

X-XR SIGN REMOVAL

(D) DO NOT DISTURB

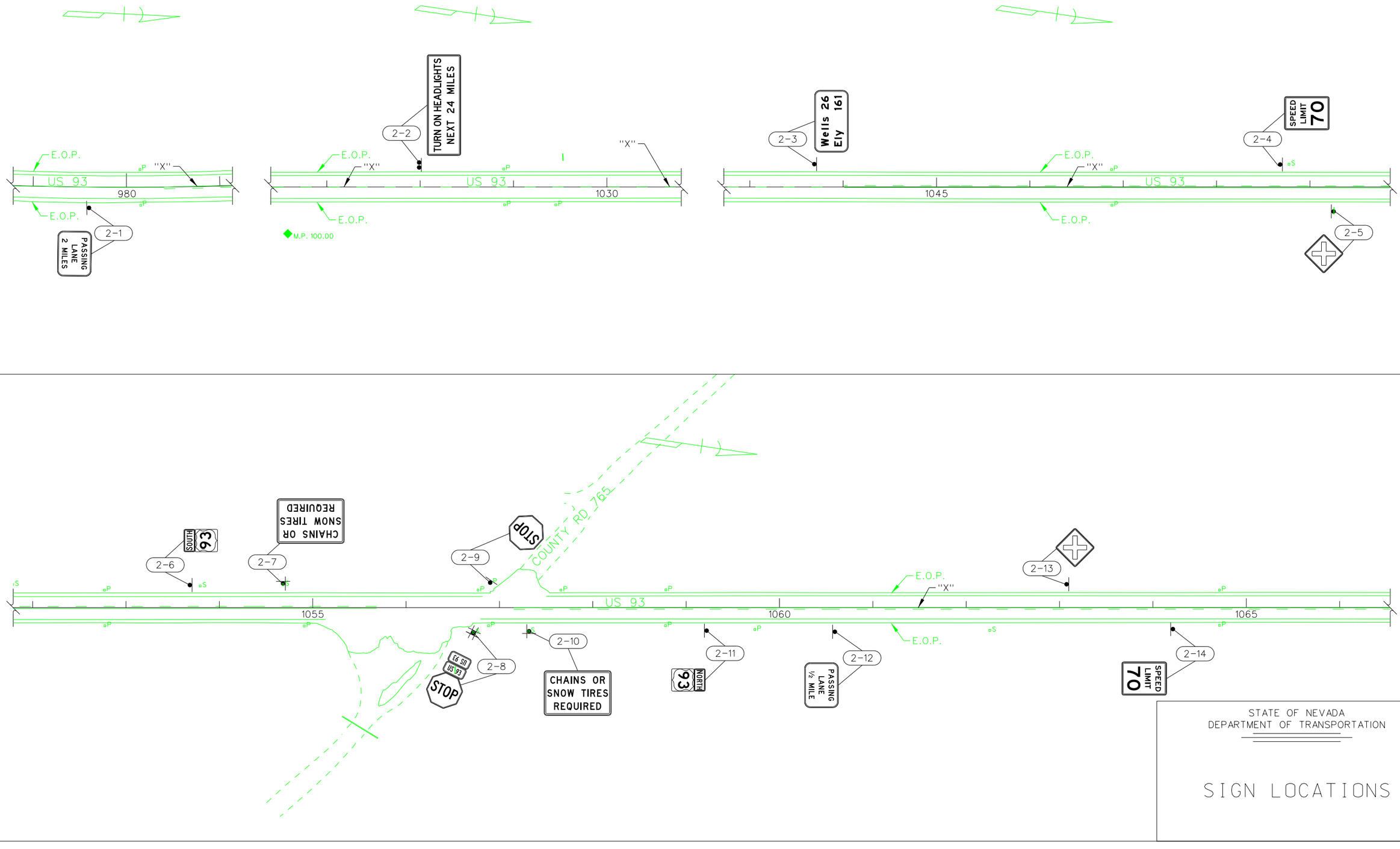
(A) DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN REMOVALS
"ES" 43+00 TO "R4" 16+50

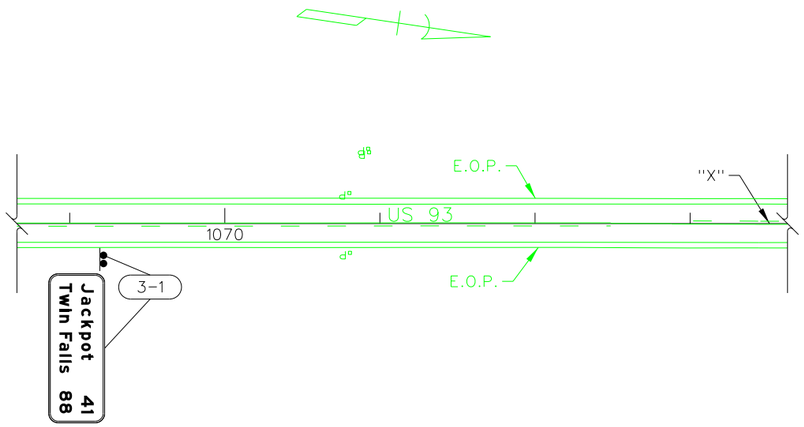
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS2

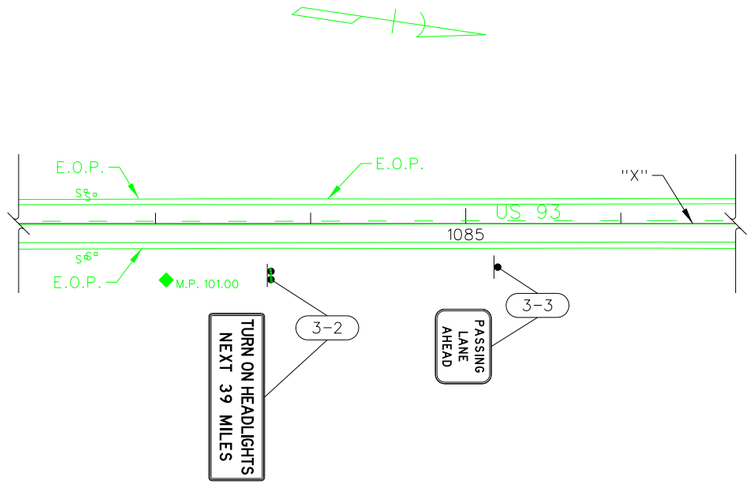


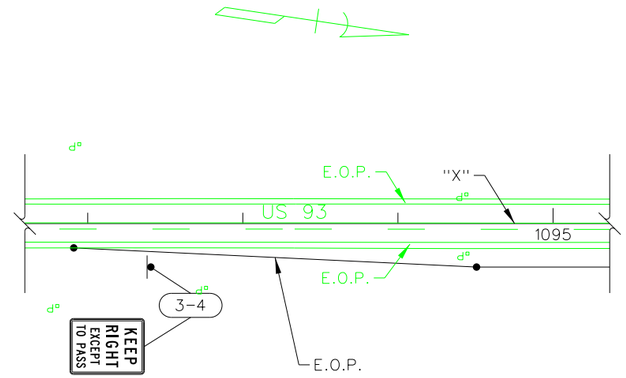
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

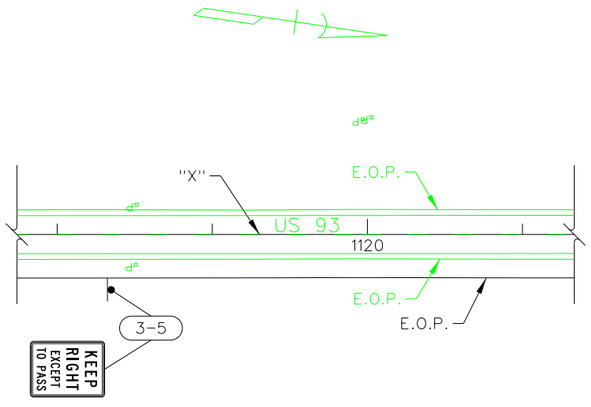
SIGN LOCATIONS

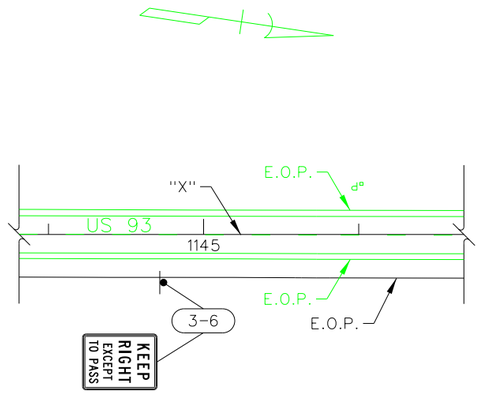
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS3

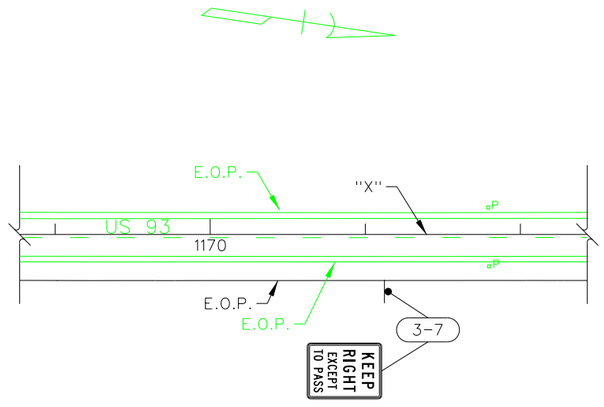


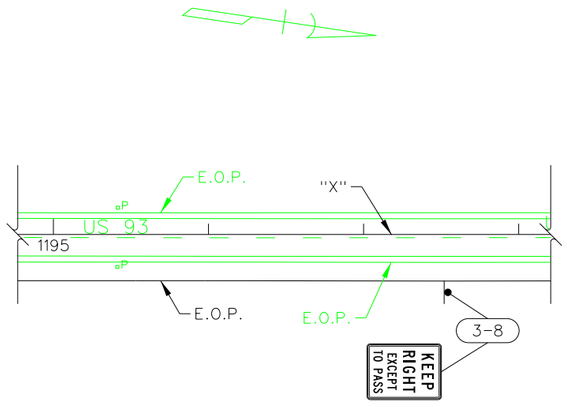








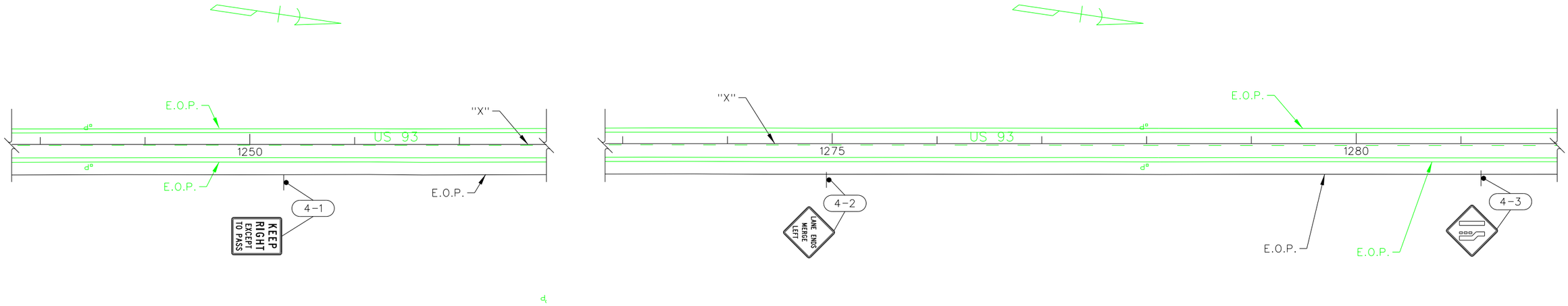


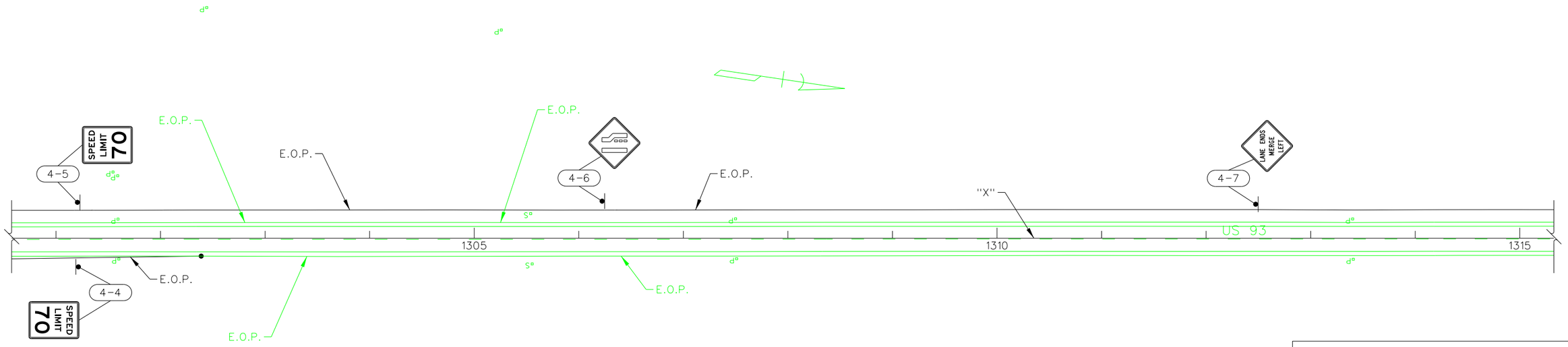


STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN LOCATIONS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS4

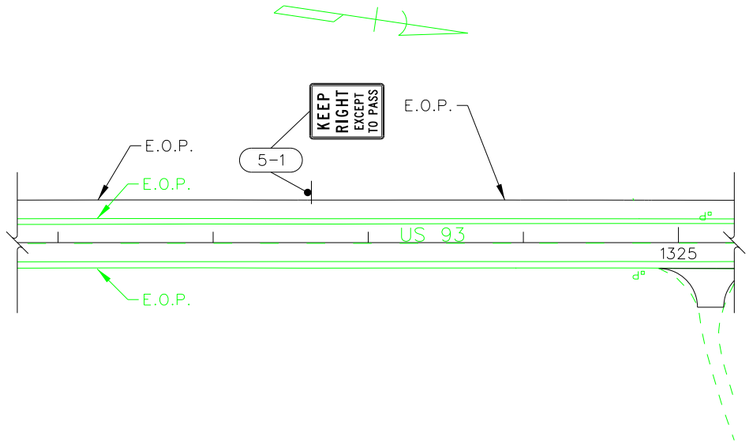


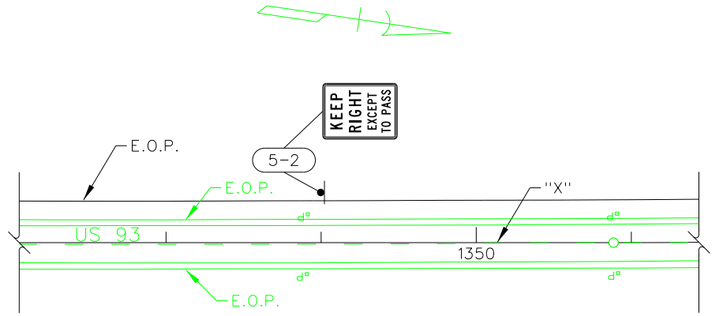


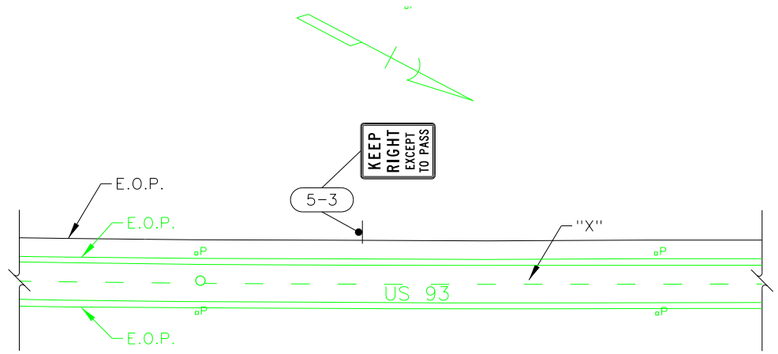
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

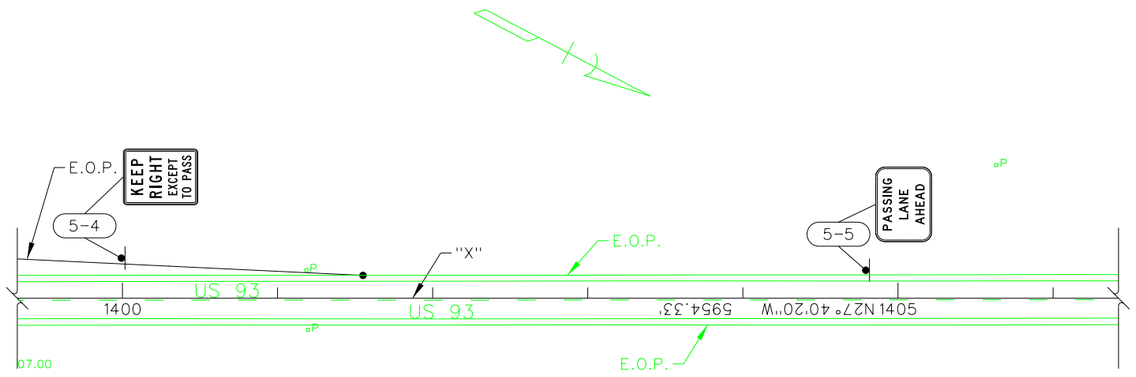
SIGN LOCATIONS

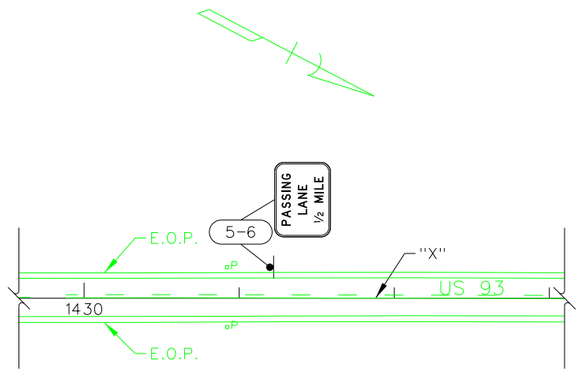
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS5

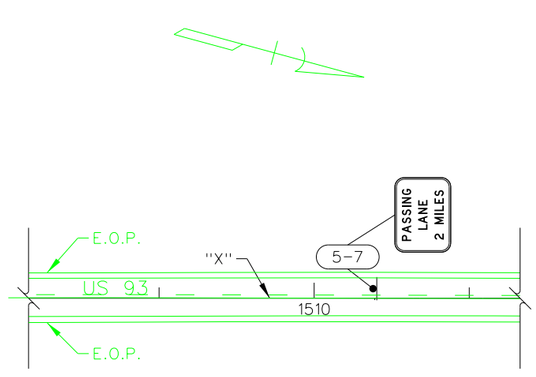








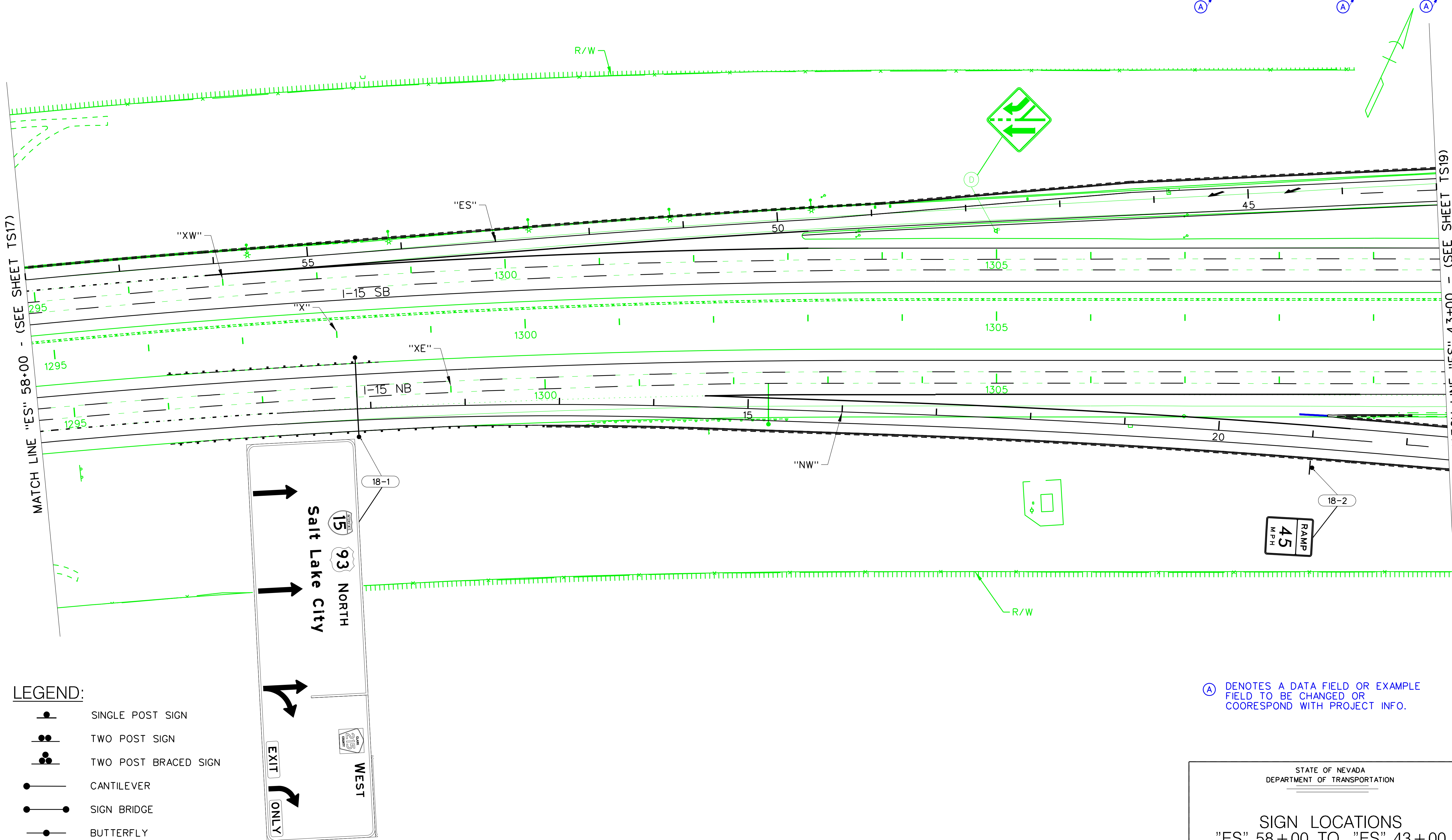




STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN LOCATIONS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS18



LEGEND:

- SINGLE POST SIGN
- TWO POST SIGN
- TWO POST BRACED SIGN
- CANTILEVER
- SIGN BRIDGE
- BUTTERFLY
- (XX-X) SIGN INSTALLATION
- (D) DO NOT DISTURB

(A) DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

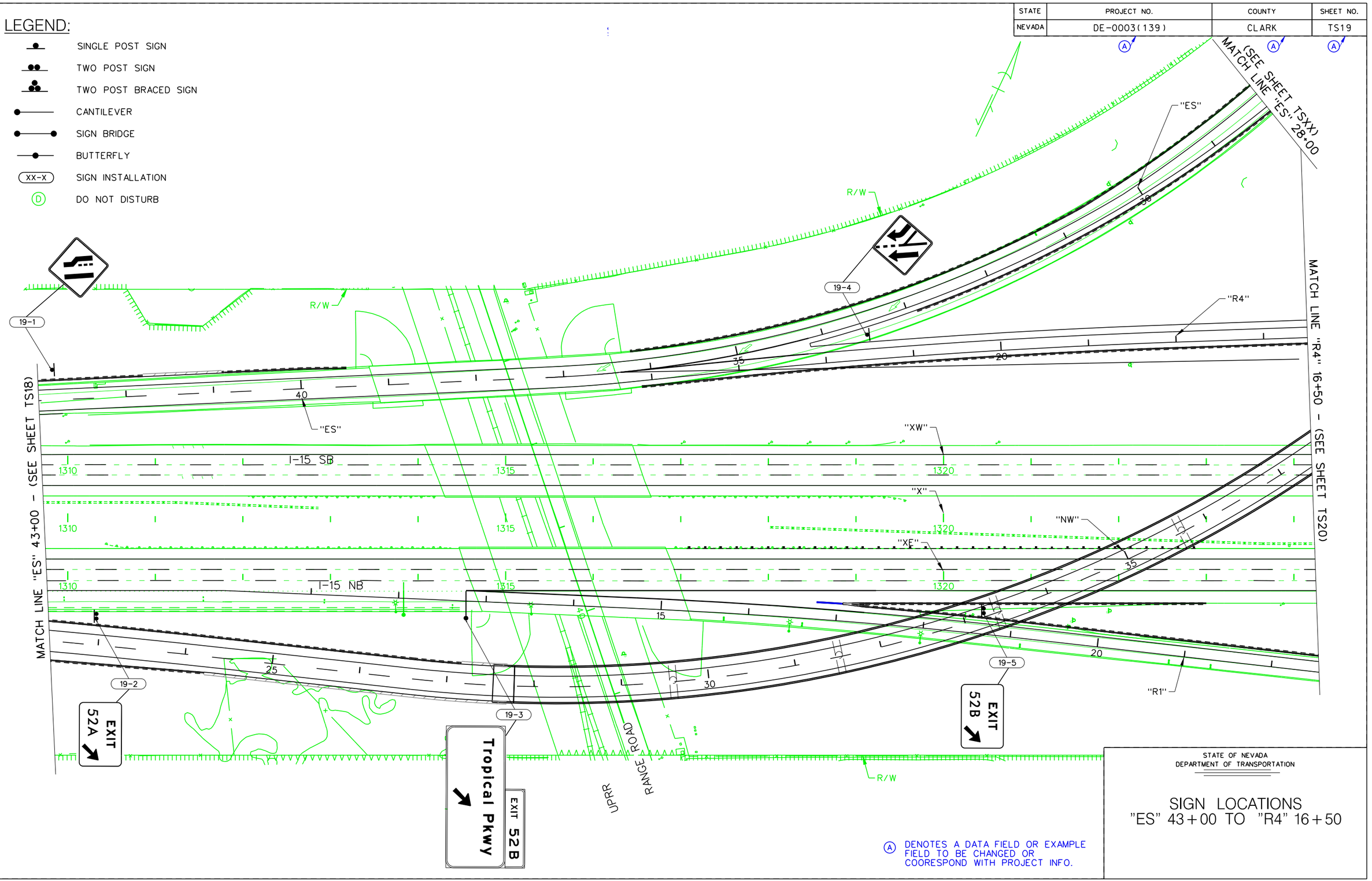
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN LOCATIONS
"ES" 58+00 TO "ES" 43+00

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS19

LEGEND:

- SINGLE POST SIGN
- TWO POST SIGN
- TWO POST BRACED SIGN
- CANTILEVER
- SIGN BRIDGE
- BUTTERFLY
- (XX-X) SIGN INSTALLATION
- (D) DO NOT DISTURB

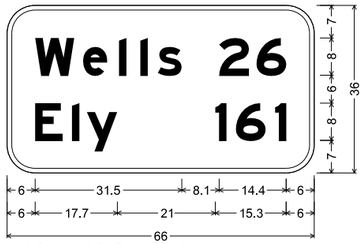


Ⓐ DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

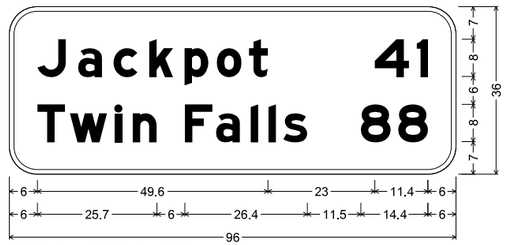
SIGN LOCATIONS
"ES" 43+00 TO "R4" 16+50

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS6



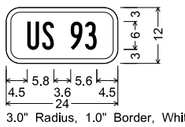
6.0" Radius, 1.0" Border, White on Green;
[Wells] E Mod; [26] E Mod;
[Ely] E Mod 75% spacing; [161] E Mod;

2-3



6.0" Radius, 1.0" Border, White on Green;
[Jackpot] E Mod; [41] E Mod; [Twin Falls] E Mod 75% spacing;
[88] E Mod;

3-1



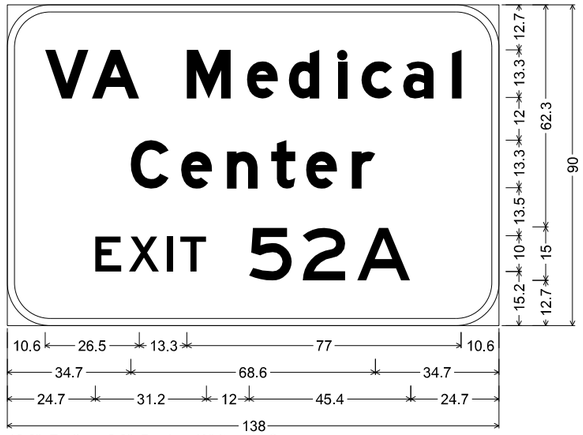
3.0" Radius, 1.0" Border, White on Green;
[US 93] B 60% spacing;

2-8

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

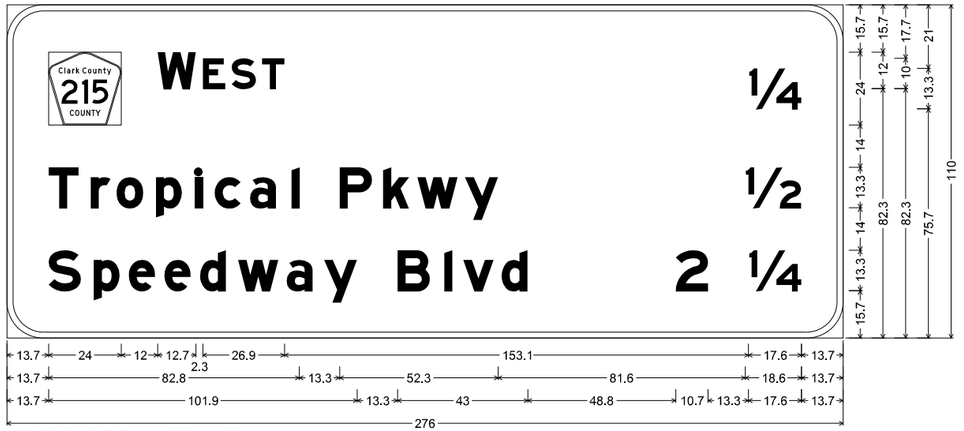
SIGN DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS33



12.0" Radius, 2.0" Border, White on Green;
[VA Medical] E Mod; [Center] E Mod; [EXIT] E; [52A] E;

17-2

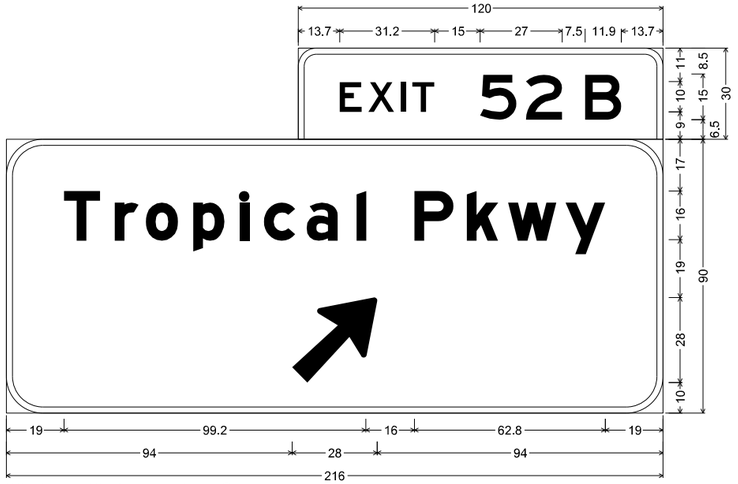


12.0" Radius, 2.0" Border, White on Green;
[WEST] E Mod; [1/4] E Mod; [Tropical Pkwy] E Mod; [1/2] E Mod; [Speedway Blvd] E Mod; [2] E Mod; [1/4] E Mod;

17-3

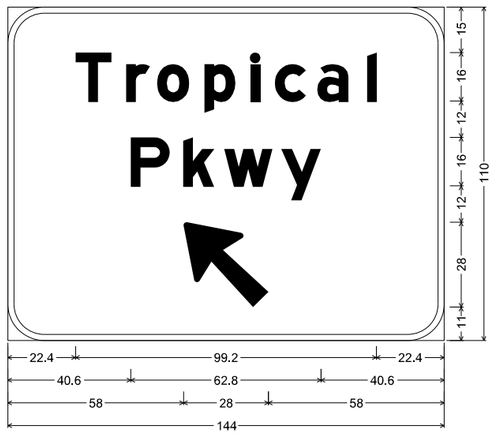
6.0" Radius, 2.0" Border, White on Green;
[EXIT] E; [52] E; [B] E;
12.0" Radius, 2.0" Border, White on Green;
[Tropical] E Mod; [Pkwy] E Mod; [1/4] E; [MILE] E;

17-4



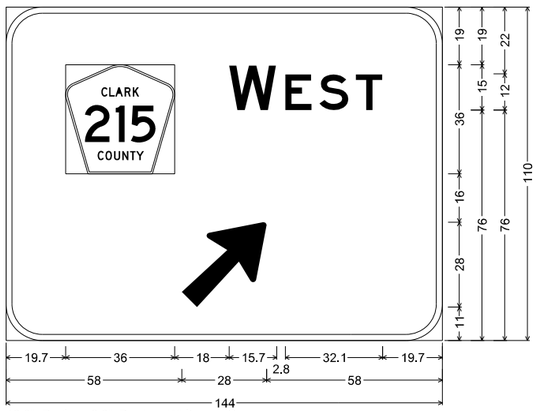
6.0" Radius, 2.0" Border, White on Green;
[EXIT] E; [52] E; [B] E;
12.0" Radius, 2.0" Border, White on Green;
[Tropical Pkwy] E Mod; Arrow 16-2LV - 35.6" 45°;

19-3



12.0" Radius, 2.0" Border, White on Green;
[Tropical] E Mod; [Pkwy] E Mod; Arrow 16-2LV - 35.6" 135°;

21-2



12.0" Radius, 2.0" Border, White on Green;
[WEST] E; Arrow 16-2LV - 35.6" 45°;

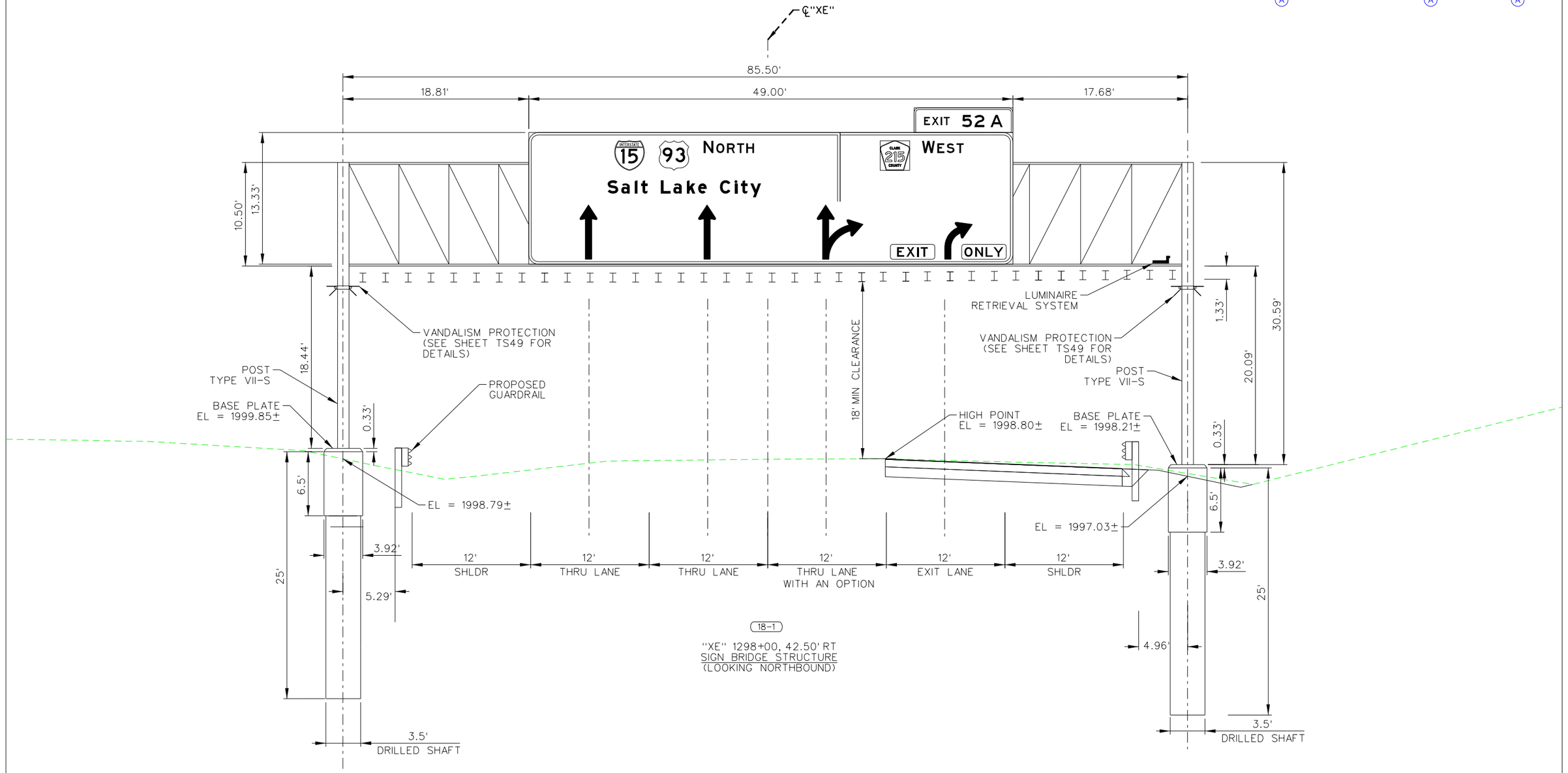
21-2

Ⓐ DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS38



18-1

"XE" 1298+00, 42.50' RT
SIGN BRIDGE STRUCTURE
(LOOKING NORTHBOUND)

NOTES:

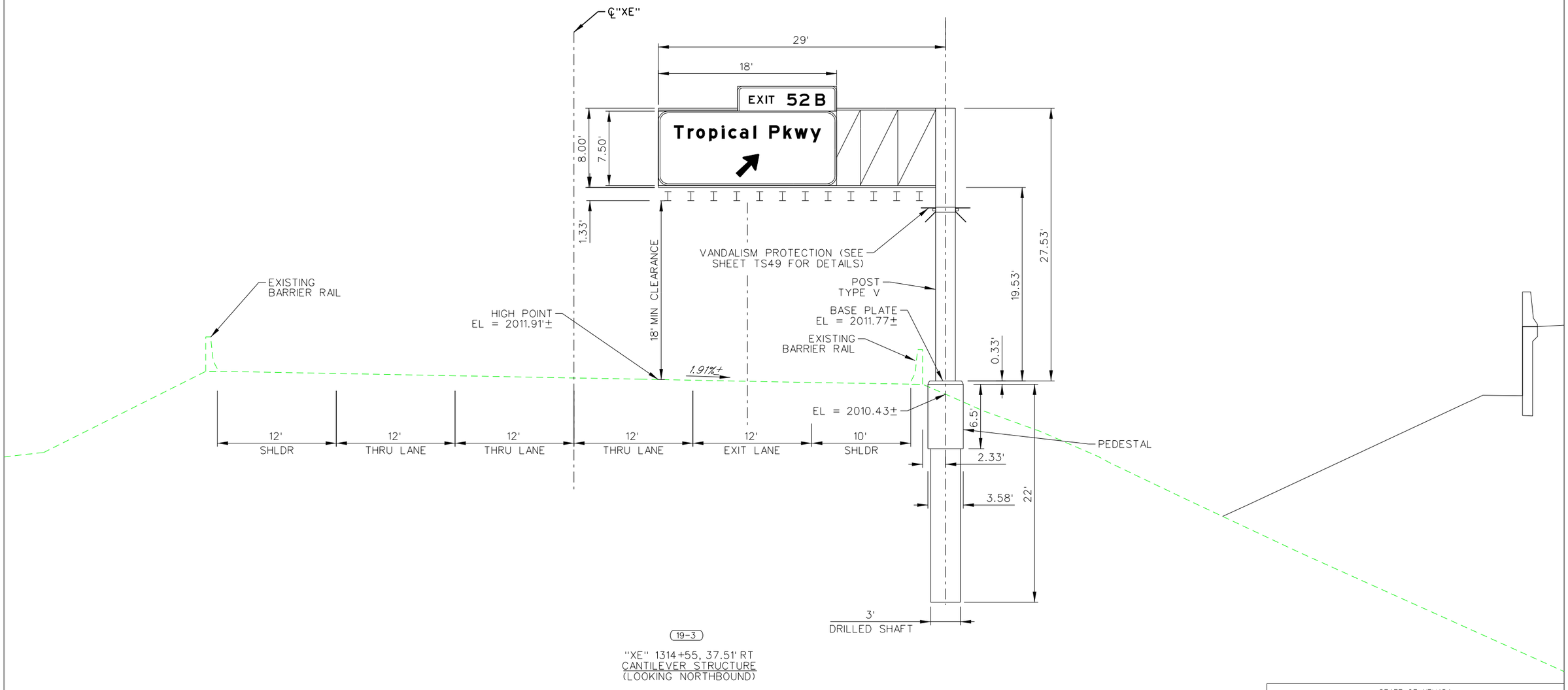
1. SEE NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION FOR SIGN STRUCTURE DETAILS.
2. CONTRACTOR TO VERIFY ELEVATIONS IN THE FIELD BEFORE CONSTRUCTION.

(A) DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE DETAILS "XE" 1298+00

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS39
	(A)	(A)	(A)



19-3

"XE" 1314+55, 37.51' RT
CANTILEVER STRUCTURE
(LOOKING NORTHBOUND)

NOTES:

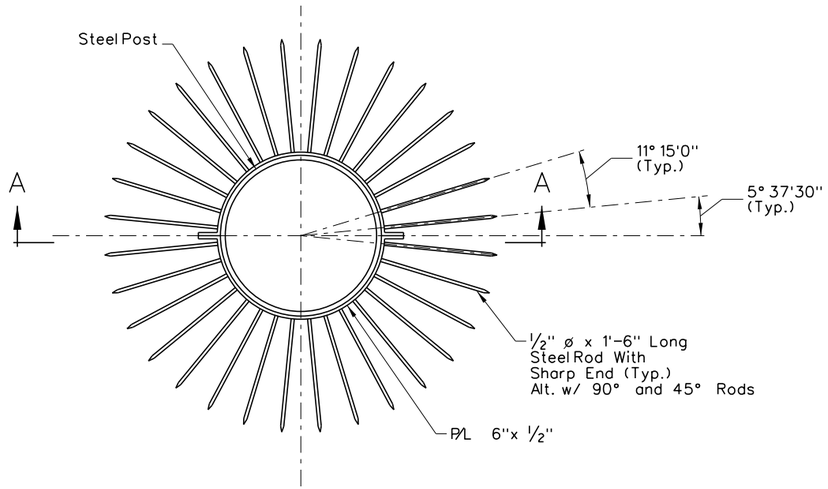
1. SEE NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION FOR SIGN STRUCTURE DETAILS.
2. CONTRACTOR TO VERIFY ELEVATIONS IN THE FIELD BEFORE CONSTRUCTION.

(A) DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

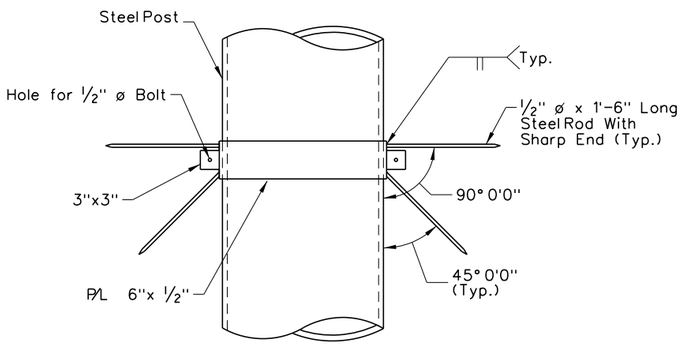
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SIGN STRUCTURE DETAILS "XE" 1314+55

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS49
	(A)	(A)	(A)



VANDALISM PROTECTION PLAN



SECTION A-A

(A) DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

VANDALISM PROTECTION DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS7

COUNTY	MILEPOST	LINE	STATION NUMBER	PANEL DIRECTION		DESCRIPTION	NOTES
EL	99.00	"X"	0971+38.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	99.60	"X"	1002+79.95	NORTH	SOUTH	8" X 24" STANDARD MILEPOST PANEL, BLACK ON WHITE	TRAIL EDGE B-577
EL	100.00	"X"	1024+18.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	101.00	"X"	1076+98.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	102.00	"X"	1129+78.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	103.00	"X"	1182+58.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	104.00	"X"	1235+38.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	105.00	"X"	1288+18.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	106.00	"X"	1340+98.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	107.00	"X"	1393+78.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	
EL	108.00	"X"	1446+58.35	NORTH	SOUTH	18" x 54" ENHANCED MILEPOST PANEL, BLACK ON WHITE	

NOTES:

1. REMOVE EXISTING MILEPOSTS AT NO DIRECT PAYMENT

2. MILEPOSTS SHALL BE PAID FOR UNDER BID ITEM 627 0190, PERMANENT SIGNS (GROUND MOUNTED) (METAL SUPPORTS).

3. SEE DM-3 OF THE NDOT STANDARD PLANS (2020) FOR DETAILS OF MILEPOSTS.

4. MILEPOST PANEL LOCATIONS ARE STATIONED IN THE CARDINAL DIRECTION OF THE ROUTE AND SHALL BE INSTALLED FOR BOTH DIRECTIONS.

5. ENHANCED REFERENCE PANELS AND STANDARD MILEPOST PANELS SHALL BE MOUNTED ON THE RIGHT SIDE OF THE ROAD FACING APPROACHING TRAFFIC.

6. ENHANCED REFERENCE PANELS MAY BE MOUNTED BACK-TO-BACK ON THE MEDIAN BARRIER RAIL WHEN THERE IS A MEDIAN BARRIER SEPARATION, OR A PHYSICAL CONSTRIANT PREVENTS INSTALLATION ON THE RIGHT SIDE.

7. MILEPOST PANELS AT COUNTY LINE LOCATIONS SHALL BE INSTALLED ONTO THE SAME POST AS THE COUNTY LINE DESIGNATION GUIDE SIGNS. FOR DETAILS ON INSTALLING MUTIPLE MILEPOST PANELS ONTO SIGN POSTS REFER TO THE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION TRS-3.
IF A COUNTY LINE DESIGNATION GUIDE SIGN IS NOT PRESENT, INSTALL THE TWO COUNTY LINE MILEPOST SIGNS SIDE BY SIDE ON A SINGLE TELSPAR POST REFER TO THE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION DM-3.

MILEPOST QUANTITIES		
	NO. PANELS	SQ FT
STANDARD MILEPOST	2	2.67
US ENHANCED MILEPOST	20	120.00
SR ENHANCED MILEPOST	0	0.00
ENHANCED INTERSTATE MILEPOST	0	0.00
	TOTAL	**122.67**

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

MILEPOST INDEX

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	DE-0003(139)	CLARK	TS44

Ⓐ Ⓐ Ⓐ

PROJECT DE-0003(139)

ITEM NO.	DESCRIPTION	TOTAL	UNIT
627 0022	PERMANENT OVERHEAD SIGN PANEL, RECONSTRUCT	5	EACH
627 0110	PERMANENT OVERHEAD SIGN SUPPORT STRUCTURES	1	LS
627 0130	PERMANENT OVERHEAD SIGN SUPPORT STRUCTURES, REMOVE	7	EACH
627 0150	PERMANENT SIGN PANELS (OVERHEAD)	4008	SQFT
627 0160	PERMANENT SIGN PANELS (OVERHEAD)(REMOVE)	2357	SQFT
627 0190	PERMANENT SIGNS (GROUND MOUNTED)(METAL SUPPORTS)	1662	SQFT
627 0220	PERMANENT SIGN PANELS (PANELS ONLY)	36	SQFT
627 0240	PERMANENT SIGNS, REMOVE	1666	SQFT
627 0250	PERMANENT SIGNS, REMOVE (PANELS ONLY)	214	SQFT
627 0260	PERMANENT SIGNS, RESET	25	SQFT

SIGN GENERAL NOTES:

1. POST LENGTHS, FOR ALL GROUND MOUNTED SIGNS, ARE CALCULATED USING AN ASSUMED CROSS-SLOPE AT THE SIGN BASE, AS INDICATED IN THE COLUMN MARKED "SLOPE" ON THE SUMMARY SHEET. POST LENGTHS NOTED ARE FOR ESTIMATION PURPOSES ONLY. POST LENGTHS SHALL BE FIELD VERIFIED AND CHECKED PRIOR TO THE ORDER OF THE POST BY THE CONTRACTOR.
2. SIGN NUMBERS ARE TAKEN FROM THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2009 & REVISIONS), STANDARD HIGHWAY SIGNS (2004 & REV) AND STANDARD HIGHWAY SIGNS – NEVADA SUPPLEMENT (2006).
3. MOUNTING HEIGHT SHALL BE AS SHOWN ON SHEET TRS-1 OF NDOT STANDARD PLANS (2020 EDITION), EXCEPT AS NOTED IN REMARKS COLUMN OF SIGN SUMMARY. POST LENGTHS FOR ALL GROUND MOUNTED SIGNS ARE CALCULATED TO THE NEAREST INCH.
4. SIGN INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (2020 EDITION), ROADSIDE SIGNS.
5. SIGNS SHOWN IN PLANS WITH A D INDICATE SIGNS THAT ARE TO REMAIN IN PLACE (DO NOT DISTURB). THEY ARE SHOWN FOR REFERENCE PURPOSES ONLY.
6. SIGNS SHOWN IN PLANS WITH AN R INDICATE SIGNS THAT ARE TO BE REMOVED.
7. SIGNS SHOWN IN PLANS WITH A T INDICATE SIGN INSTALLATIONS THAT ARE TEMPORARY.
8. ANY SIGN NOT SHOWN IN PLANS SHALL NOT BE DISTURBED.
9. ALL RESET SIGN PANELS SHALL BE INSTALLED ON NEW SUPPORTS.
10. ALL STREET NAME GUIDE SIGNS (SIGN NO. D3-1) SHALL HAVE THE SAME LEGEND BOTH SIDES, AND SHALL BE MOUNTED ON THE TOP OF THE SIGN POST, PARALLEL TO THE NAMED STREET.
11. FABRICATION DRAWINGS OF ALL OVERHEAD SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE CONTRACTOR'S ORDER FOR FABRICATION.
12. FOR INSTALLATION AND CLEARANCE OF OVERHEAD SIGNS, SEE SHEETS TSXX.
13. EACH SIGN REQUIRING LIGHTING SHALL HAVE INDIVIDUAL PHOTO-ELECTRIC CELL.
14. OMIT WALKWAY ON OVERHEAD SIGNS RECEIVING LUMINAIRE RETRIEVAL SYSTEM.
15. ALL SIGNS INSTALLED ON A 3" ROUND POST SHALL USE Z BAR SIGN PANEL BRACING. REFERENCE TRS-4 OF THE STANDARD PLANS FOR DETAILS.
16. MOUNTING HEIGHT & DISTANCE TO EDGE OF SIGNS ON MULTIUSE PATH SHALL BE AS SHOWN IN MUTCD (2009).
17. FOR STATE FUNISHED SIGN SHOWN IN THE SIGN SUMMARY, CONTACT NDOT SIGN SHOP TO ARRANGE FABRICATION AND PICK-UP A MINIMUM OF 10 DAYS PRIOR. DISTRICT 2, 310 GALLETTI WAY, SPARKS NV 89431. 755-834-8456
18. FOR OVERHEAD SIGN REPLACEMENT THE COST OF REMOVING OR MODIFYING AN EXISTING SIGN PANEL FRAME AND MANUFACTURING NEW SIGN PANEL FRAME, SIGN STRUTS, MOUNTING BRACKETS, MOUNTING HARDWARE, AND ANY OTHER RELATED WORK NECESSARY TO RETROFIT THE EXISTING SIGN STRUCTURE AND PANEL FRAME SHALL BE INCLUDED IN THE BID ITEM 627 0022 "PERMANENT OVERHEAD SIGN PANEL, RECONSTRUCT", EACH. THE COST OF REMOVING THE EXISTING SIGN PANEL SHALL BE PAID FOR UNDER BID ITEM 627 0160 "PERMANENT SIGN PANELS (OVERHEAD) (REMOVE)", SQFT. THE COST OF THE NEW OVERHEAD SIGN PANEL SHALL BE PAID FOR UNDER BID ITEM 627 0150 "PERMANENT SIGN PANELS (OVERHEAD)", SQFT. THE COST OF RESETTING AN EXISTING SIGN PANEL SHALL BE PAID FOR UNDER BID ITEM 627 0170 "PERMANENT SIGN PANELS (OVERHEAD) (RESET)", SQFT.

Ⓐ DENOTES A DATA FIELD OR EXAMPLE FIELD TO BE CHANGED OR COORESPOND WITH PROJECT INFO.

SIGN SUMMARY

NEW LOCATIONS REMOVALS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS 9

****POST LENGTHS & TYPE ARE FOR INFORMATIONAL ESTIMATING PURPOSE ONLY. SEE GENERAL NOTES.**

Remarks	Brace Length (ft)	Post ** Length (ft) Inner	Post ** Length (ft) Outer	Post ** # of Posts	Post ** Type and Size (in)	Mounting Ht. (ft)	Slope	Curb & Gutter	Panel Size (in. x in.) w x h	Panel Area (Actual Sq. Ft.)	New Bid Item Number	Sign No.	Panel Size (in. x in.) w x h	Panel Area (Actual Sq. Ft.)	Removal Bid Item Number	Sign Message	Sign Station	Location	Sign Number New	Sign Number Removal
							:													
							:													
SEE SHEET TS7 FOR DETAILS							:		8 x 24	2.67	627 0190					STANDARD MILEPOST PANELS	VARIES			
SEE SHEET TS7 FOR DETAILS							:		18 x 48	120.00	627 0190					ENHANCED US MILEPOST PANELS	VARIES			
							:													
							:													
		12' 6"		1	3" RND SNGL POST	7	3 : 1	N	48 x 36	12.00	627 0190	GNV5-2				PASSING LANE 2 MILES	"X" 979+60	RT	2-1	
							:													
INSTALL ON SIGN ISLAND	20' 2"	17' 2"	19' 0"	2	3" RND DBL POST BRACED	7	4 : 1	N	108 x 36	27.00	627 0190	RNV8-3	108 x 36	27.00	627 0240	TURN ON HEADLIGHTS NEXT 24 MILES	"X" 1027+99	LT	2-2	1-1R
							:													
		12' 9"		1	3" RND SNGL POST	7	3 : 1	N	66 x 36	16.50	627 0190	SPCL				WELLS 26 ELY 161	"X" 1043+68	LT	2-3	
							:													
		14' 7"		1	3" RND SNGL POST	7	2 : 1	N	36 x 48	12.00	627 0190	R2-1	36 x 48	12.00	627 0240	SPEED LIMIT 70	"X" 1048+77	LT	2-4	1-2R
							:													
		12' 1"		1	2.5" SQ 12 GA POST	7	4 : 1	N	30 x 30	6.25	627 0190	W2-1				CROSS ROAD (SYMBOL)	"X" 1049+25	RT	2-5	
							:													
							:					SPCL	84 x 36	21.00	627 0240	JACKPOT 41 TWIN FALLS 88	"X" 1049+28	RT		1-3R
							:													
							:					SPCL	54 x 36	13.50	627 0240	WELLS 26 ELY 161	"X" 1051+78	LT		1-4R
							:													
							:		24 x 12	2.00	627 0190	M3-3				CARDINAL DIRECTION MARKER-SOUTH	"X" 1053+68	LT	2-6	
		12' 4"		1	2.5" SQ 12 GA POST	6	2 : 1	N	24 x 24	4.00	627 0190	M1-4				U.S. ROUTE 93 MARKER				
							:													
							:					M3-3	24 x 12	2.00	627 0240	CARDINAL DIRECTION MARKER-SOUTH	"X" 1053+78	LT		1-5R
							:					M1-4	24 x 24	4.00	627 0240	U.S. ROUTE 93 MARKER				
							:													
SPECIAL PIVOT POST		14' 10"		1	PIVOT POST	7	3 : 1	N	72 x 48	24.00	627 0200	RNV7-1	72 x 48	24.00	627 0240	CHAINS OR SNOW TIRES REQUIRED	"X" 1054+68	LT	2-7	1-6R
							:													
							:		24 x 12	2.00	627 0190	D3-1				US 93 (STREET NAME PLAQUE)	"X" 1056+72	RT	2-8	1-7R
							:		24 x 12	2.00	627 0190	D3-1				US 93 (STREET NAME PLAQUE)				
		12' 5"		1	3" RND SNGL POST	6	6 : 1	N	36 x 36	7.46	627 0190	R1-1	36 x 36	7.46	627 0240	STOP				
							:													
		12' 4"		1	2.5" SQ 12 GA POST	6	3 : 1	N	36 x 36	7.46	627 0190	R1-1	36 x 36	7.46	627 0240	STOP	"X" 1056+90	LT	2-9	1-8R
							:													
SPECIAL PIVOT POST		14' 10"		1	PIVOT POST	7	3 : 1	N	72 x 48	24.00	627 0200	RNV7-1	72 x 48	24.00	627 0240	CHAINS OR SNOW TIRES REQUIRED	"X" 1057+32	RT	2-10	1-9R
							:													
							:		24 x 12	2.00	627 0190	M3-1				CARDINAL DIRECTION MARKER-NORTH	"X" 1059+23	RT	2-11	
		11' 8"		1	2.5" SQ 12 GA POST	6	4 : 1	N	24 x 24	4.00	627 0190	M1-4				U.S. ROUTE 93 MARKER				
							:													
		11' 10"		1	3" RND SNGL POST	7	4 : 1	N	48 x 36	12.00	627 0190	GNV5-2				PASSING LANE 1/2 MILE	"X" 1060+59	RT	2-12	
							:													
							:					R2-1	36 x 48	12.00	627 0240	SPEED LIMIT 70	"X" 1062+26	RT		1-10R
							:													
		12' 9"		1	2.5" SQ 12 GA POST	7	3 : 1	N	30 x 30	6.25	627 0190	W2-1				CROSS ROAD (SYMBOL)	"X" 1063+07	LT	2-13	
							:													
		13' 4"		1	3" RND SNGL POST	7	3 : 1	N	36 x 48	12.00	627 0190	R2-1				SPEED LIMIT 70	"X" 1064+21	RT	2-14	
							:													
	15' 0"	13' 2"	14' 0"	2	3" RND DBL POST BRACED	7	4 : 1	N	96 x 36	24.00	627 0190	SPCL				JACKPOT 41 TWIN FALLS 88	"X" 1069+22	RT	3-1	
							:													
		10' 0"	8' 0"	2	3" RND DBL POST BRACED	7	-6 : 1	N	108 x 36	27.00	627 0190	RNV8-3	108 x 36	27.00	627 0240	TURN ON HEADLIGHTS NEXT 39 MILES	"X" 1083+75	RT	3-2	1-11R
							:													
		12' 6"		1	3" RND SNGL POST	7	3 : 1	N	48 x 36	12.00	627 0190	GNV5-1				PASSING LANE AHEAD	"X" 1085+20	RT	3-3	
							:													
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1092+76	RT	3-4	
							:													
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1118+34	RT	3-5	
							:													
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1144+74	RT	3-6	
							:													
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1171+14	RT	3-7	
							:													
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1197+54	RT	3-8	
							:													

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NHPP-STBG-093-5(008)	ELKO	TS 10

SIGN SUMMARY

NEW LOCATIONS REMOVALS

POST LENGTHS & TYPE ARE FOR INFORMATIONAL ESTIMATING PURPOSE ONLY. SEE GENERAL NOTES.

Remarks	Brace Length (ft)	Post ** Length (ft) Inner	Outer	# of Posts	Type and Size (in)	Mounting Ht. (ft)	Slope	Curb & Gutter	Panel Size (in. x in.) w h	Panel Area (Actual Sq. Ft.)	New Bid Item Number	Sign No.	Panel Size (in. x in.) w h	Panel Area (Actual Sq. Ft.)	Removal Bid Item Number	Sign Message	Sign Station	Location	Sign Number New	Removal
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1223+94	RT	3-9	
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1250+34	RT	4-1	
		13' 5"		1	2.5" SQ 12 GA POST	7	6 : 1	N	36 x 36	9.00	627 0190	W9-2L				LANE ENDS MERGE LEFT	"X" 1274+97	RT	4-2	
		13' 5"		1	2.5" SQ 12 GA POST	7	6 : 1	N	36 x 36	9.00	627 0190	W4-2R				LANE ENDS (SYMBOL)	"X" 1281+22	RT	4-3	
		12' 1"		1	3" RND SNGL POST	7	6 : 1	N	36 x 48	12.00	627 0190	R2-1				SPEED LIMIT 70	"X" 1301+22	RT	4-4	
		12' 1"		1	3" RND SNGL POST	7	6 : 1	N	36 x 48	12.00	627 0190	R2-1				SPEED LIMIT 70	"X" 1301+22	LT	4-5	
							:					R2-1	36 x 48	12.00	627 0240	SPEED LIMIT 70	"X" 1305+55	RT		1-12R
							:					R2-1	36 x 48	12.00	627 0240	SPEED LIMIT 70	"X" 1305+55	LT		1-13R
		12' 1"		1	2.5" SQ 12 GA POST	7	6 : 1	N	36 x 36	9.00	627 0190	W4-2R				LANE ENDS (SYMBOL)	"X" 1306+22	LT	4-6	
		12' 1"		1	2.5" SQ 12 GA POST	7	6 : 1	N	36 x 36	9.00	627 0190	W9-2L				LANE ENDS MERGE LEFT	"X" 1312+48	LT	4-7	
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1322+59	LT	5-1	
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1348+99	LT	5-2	
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1375+39	LT	5-3	
		11' 6"		1	2.5" SQ 12 GA POST	7	6 : 1	N	24 x 30	5.00	627 0190	R4-16				KEEP RIGHT EXCEPT TO PASS	"X" 1400+00	LT	5-4	
		11' 10"		1	3" RND SNGL POST	7	4 : 1	N	48 x 36	12.00	627 0190	GNV5-1				PASSING LANE AHEAD	"X" 1404+79	LT	5-5	
		11' 10"		1	3" RND SNGL POST	7	4 : 1	N	48 x 36	12.00	627 0190	GNV5-2				PASSING LANE 1/2 MILE	"X" 1431+20	LT	5-6	
		11' 10"		1	3" RND SNGL POST	7	4 : 1	N	48 x 36	12.00	627 0190	GNV5-2				PASSING LANE 2 MILES	"X" 1510+39	LT	5-7	

19.0 Bridge Plans.

General. The bridge plans show the necessary details for constructing the associated proposed bridge structure improvements. This work normally consists of structures used to convey public traffic over or under significant impediments such as roads, rivers, railroads or drainages.

Bridge Plan Guidelines. The Structures Division produces the bridge plans. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans.

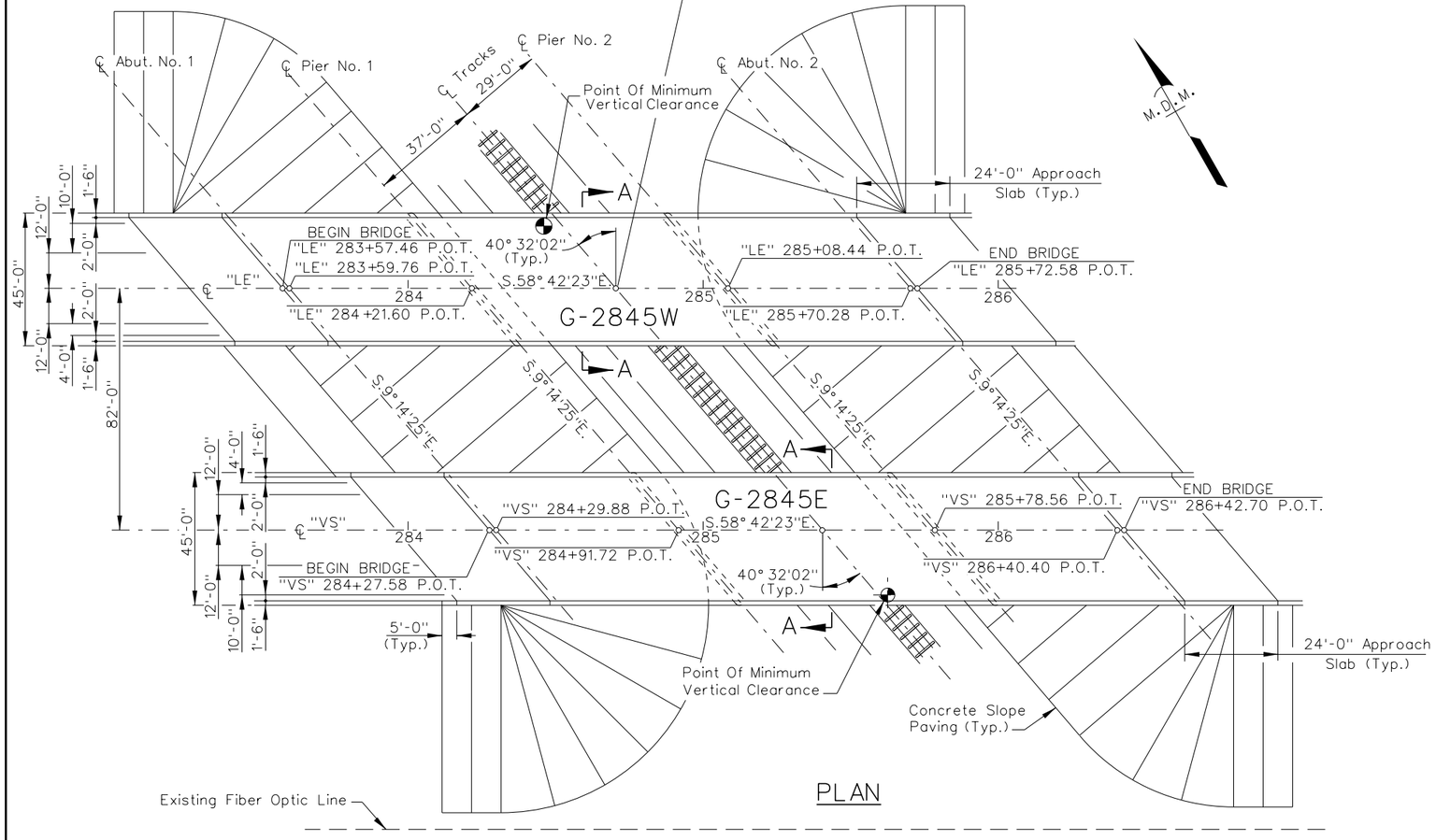
Contact the Structural Engineer for further guidelines on Bridge Plans.

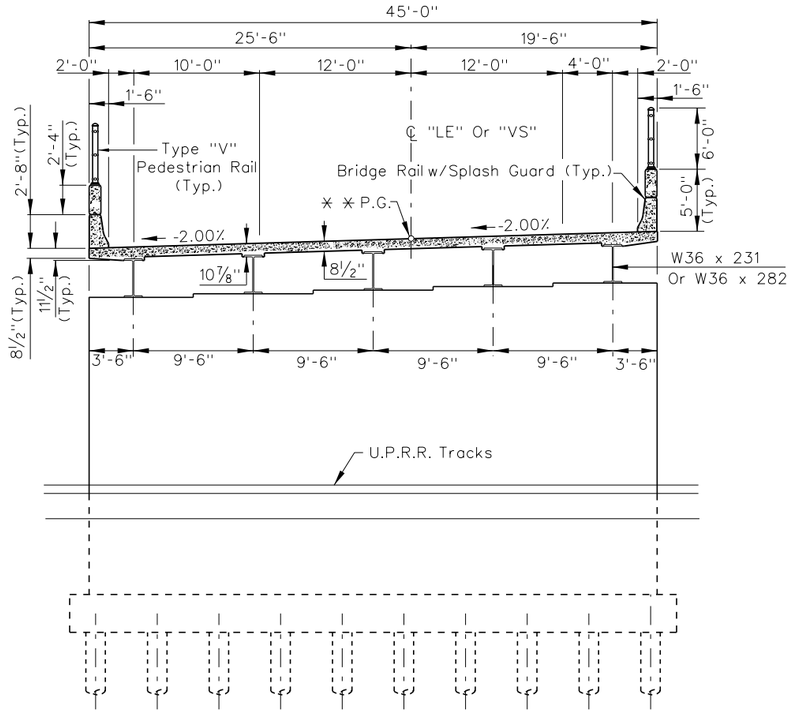
Bridge Plan Particulars.

1) Sheet numbering for bridge plans shall begin with B1. Multiple sheets shall be numbered B1, B2, B3, etc.

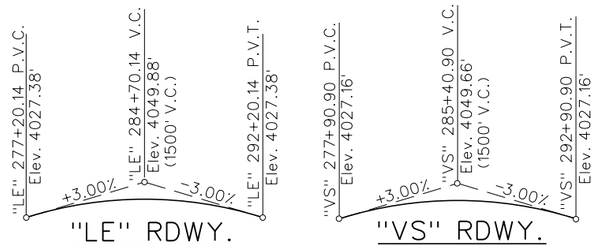
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(004)	Cchurchill	B1

R/R MP 0.52 DOT.#924107F





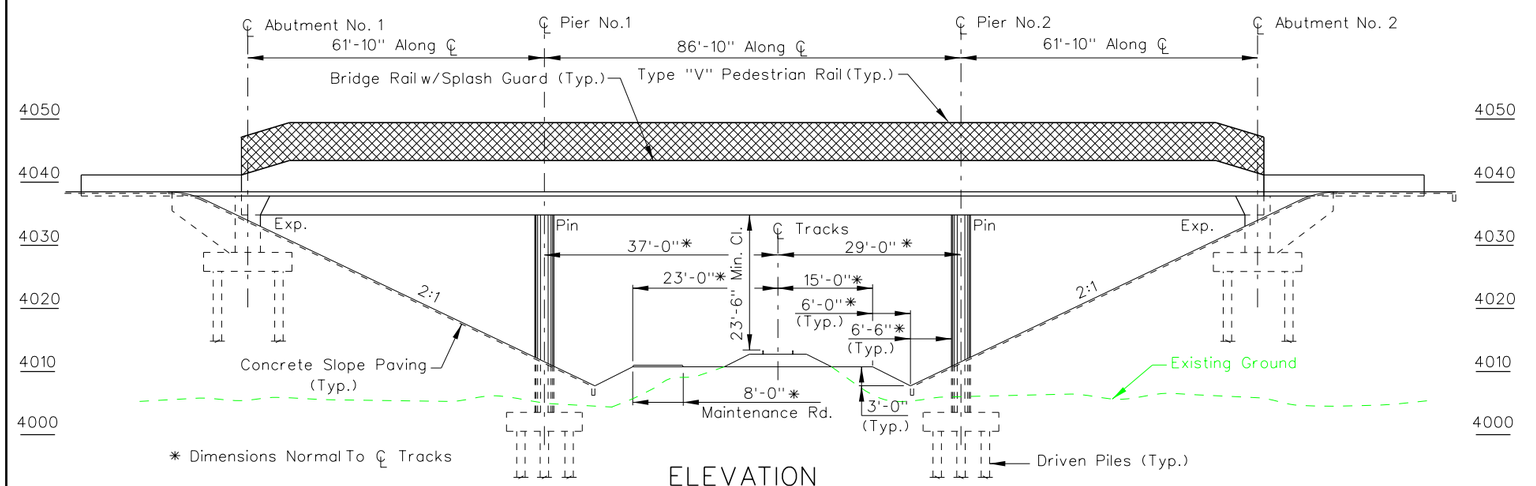
SECTION A-A



"LE" RDWY. "VS" RDWY.

PROFILE LINE

* * - PROFILE GRADE OF BRIDGE DECK AND APPROACH SLABS WILL BE ¾" HIGHER THAN ROADWAY PROFILE GRADE.



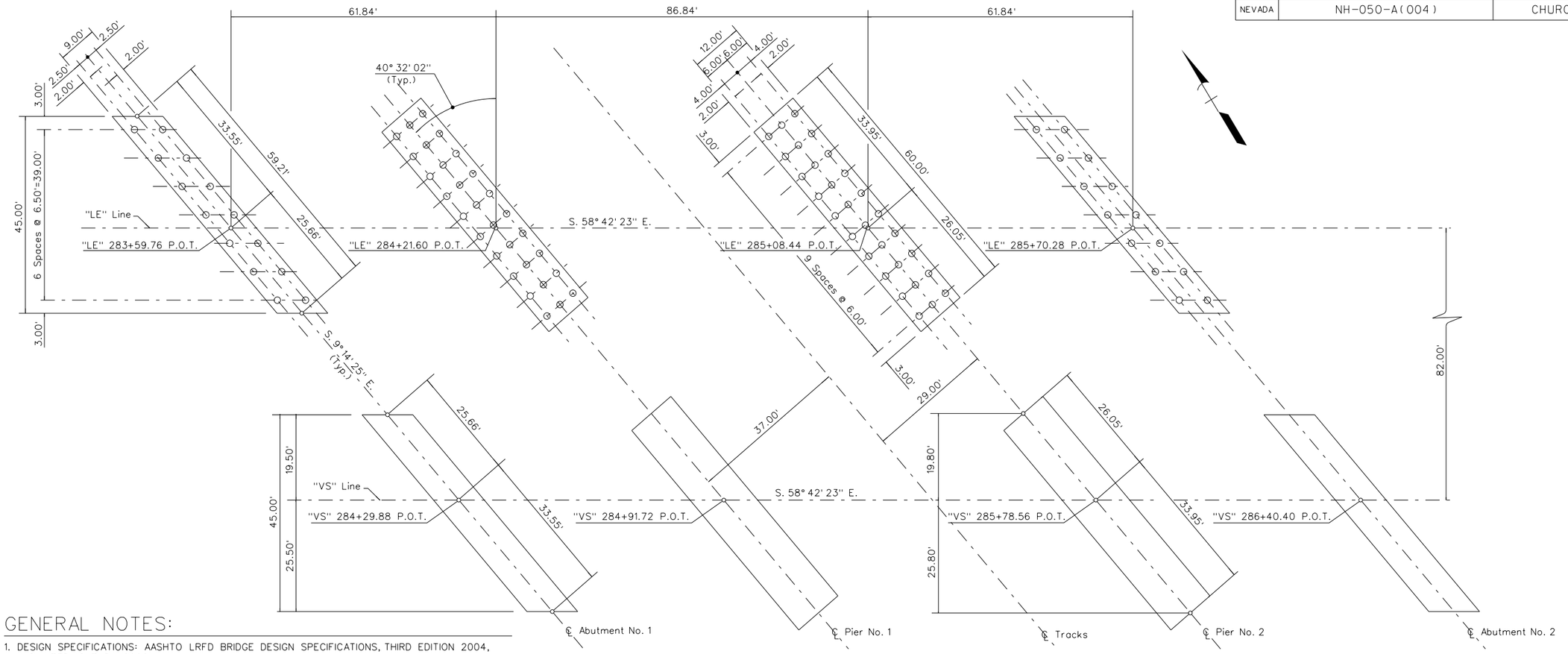
ELEVATION

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

US 50A-CH 2.960
US 50A - U.P.R.R.
GRADE SEPARATION

G-2845 E&W

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(004)	CHURCHILL	B2



GEOMETRICS

DIMENSIONS SHOWN ARE TYPICAL FOR EACH FOOTING

GENERAL NOTES:

1. DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THIRD EDITION 2004, AND INTERIMS THRU 2006.
2. CONSTRUCTION SPECIFICATIONS: STATE OF NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2001" EXCEPT AS NOTED BELOW AND IN THE SPECIAL PROVISIONS FOR THIS CONTRACT.
3. DESIGN LOADS: IN ACCORDANCE WITH SPECIFICATION AND AS FOLLOWS:

   DEAD LOAD: WEIGHT OF STRUCTURE PLUS A FUTURE WEARING SURFACE OF 38.0 PSF.

   LIVE LOAD: AASHTO HL-93. OVERLOAD DESIGN BASED ON CALIFORNIA "STANDARD PERMIT DESIGN VEHICLES" (MAXIMUM OVERLOAD P-13 TRUCK). DECK DESIGN BASED ON THE EQUIVALENT STRIP METHOD WITH A 40.0 KIP AXLE.

   SEISMIC LOAD: DESIGN BASED ON AASHTO RESPONSE SPECTRA FOR TYPE II SOIL.

   BEDROCK ACCELERATION COEFFICIENT = 0.30g.
4. CONCRETE: CONCRETE SHALL BE CLASS EA MODIFIED IN THE DECK, APPROACH SLABS, AND BRIDGE RAILS. SEE CONCRETE CLASSIFICATION DIAGRAM FOR CONCRETE STRENGTHS AND PLACEMENT LOCATIONS.
5. REINFORCING STEEL: ALL REINFORCING STEEL TO BE ASTM A706 GRADE 60. DIMENSIONS RELATING TO BAR SPACING ARE CENTER TO CENTER. BENDING DIMENSIONS ARE FROM OUT TO OUT OF THE BARS. BARS SIZES THREE (3) TO NINE (9) ARE INDICATED BY THE FIRST NUMBER OF THE MARK, TEN (10) OR LARGER BY THE FIRST TWO NUMBERS. BAR MARKS ENDING WITH THE LETTER "E" INDICATE THAT THE BAR SHALL BE EPOXY COATED THE LENGTH OF THE BAR. ANY ADJUSTMENTS TO REINFORCING STEEL LENGTHS OR SPACING MUST BE APPROVED BY THE ENGINEER.
6. STRUCTURAL STEEL: ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50 UNLESS OTHERWISE NOTED ON PLANS. ALL BOLTS SHALL BE AASHTO M164 (ASTM A325) UNLESS OTHERWISE NOTED. THE FABRICATOR FOR THIS PROJECT SHALL HAVE A CATEGORY CBR CERTIFICATION BY THE AMERICAN INSTITUTE FOR STEEL CONSTRUCTION QUALITY CERTIFICATION PROGRAM.
7. CAMBER: CAMBER SHALL BE AS SHOWN ON THE PLANS.
8. FOUNDATION: THE FOUNDATION SHALL BE CONCRETE FILLED 18 INCH DRIVEN PIPE PILES FOR THE ABUTMENT AND PIER FOOTINGS. THE FOUNDATIONS WERE DESIGNED USING THE ALLOWABLE STRESS DESIGN METHOD.
9. SHORING: ALL NECESSARY SHORING MUST COMPLY WITH U.P.R.R. GUIDELINES FOR TEMPORARY SHORING, NO DIRECT PAYMENT FOR SHORING.
10. CONSTRUCTION CODE: X171

QUANTITIES

Item No.	Item	Unit	G-2845W Quantity	G-2845E Quantity	Total Quantity
206 0500	Structure Excavation	CuYd	1,340	1,340	2,680
207 0504	Granular Backfill	CuYd	950	950	1,900
502 0065	Laminated Elastomeric Bearing Pad	Each	20	20	40
502 0840	Class AA Concrete, Modified (Major)	CuYd	738	730	1,468
502 0864	Class EA Concrete, Modified (Major)	CuYd	478	478	956
502 0932	Strip Seal Expansion Joint (3" Movement)	LinFt	125	125	250
502 1008	Groove Concrete Deck Slab	SqYd	1,240	1,240	2,480
502 1010	Bridge Deck Curing Compound	Gal	75	75	150
505 0500	Reinforcing Steel	Lb	164,980	164,120	329,100
505 0504	Reinforcing Steel (Epoxy Coated)	Lb	136,040	136,030	272,070
506 0000	Structural Steel	LS	---	---	---
506 0588	Pedestrian Rail, Type V	LinFt	430	430	860
508 0016	Drive Steel Shells for Piles	Each	88	88	176
508 0023	Restrike Piles	Each	22	22	44
508 0040	Splices	Each	22	22	44
508 0054	Dynamic Load Test	Each	4	4	8
508 1508	Furnish Concrete Filled Steel Shell Piles (18 inch)	LinFt	3,340	3,340	6,680
611 0504	Class AA Concrete Slope Pavement	CuYd	185	185	370

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

GEOMETRICS GENERAL NOTES AND QUANTITIES G-2845 E. & W.

20.0 Retaining Walls and Sound Walls.

General. The structural wall plan sheets show the necessary details for constructing the associated proposed wall structure improvements. This work normally consists of walls used for retaining slopes or mitigating noise pollution.

Retaining Walls and Sound Wall Guidelines. The Roadway Designer identifies the need for an earth retaining system and provides the Geotechnical Section and Structures Division with the alignment files and cross sections. The Structural Engineer and Geotechnical Engineer typically design retaining walls. Upon completion, these plans are supplied to Roadway Design for incorporation into the contract plans.

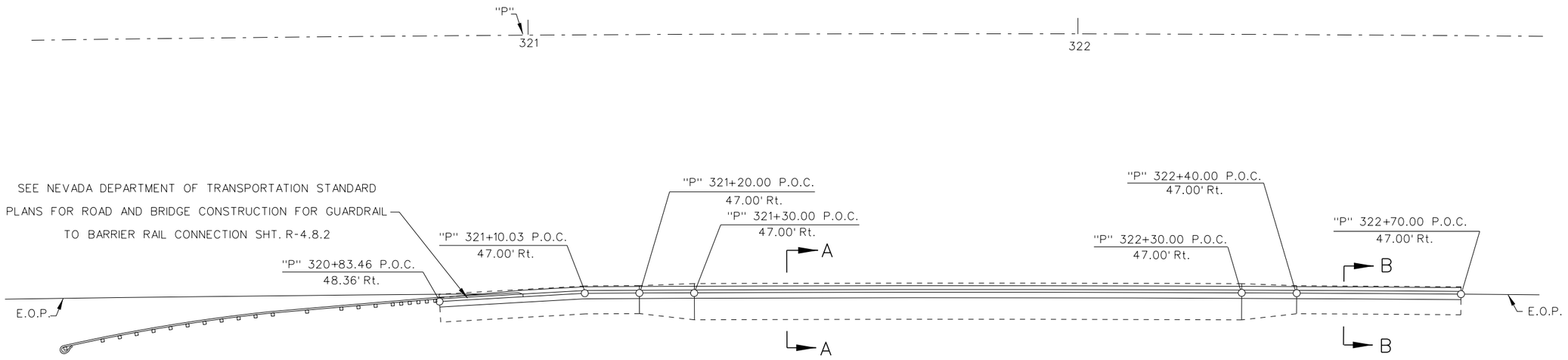
The Roadway Designer should work with the Environmental Engineer and Structural Engineer on the development of sound walls. Sound walls are typically designed by the Structural Engineer and the plans provided to Roadway Design upon completion.

Contact the Structural Engineer for further guidelines on wall detail sheets.

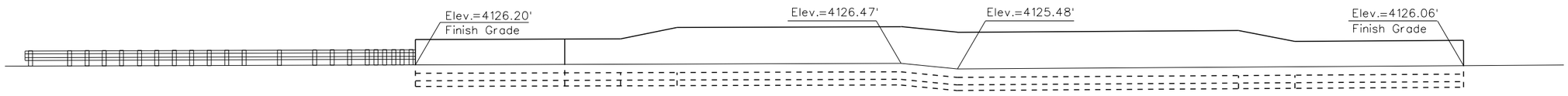
Retaining Walls and Sound Wall Particulars.

1) Sheet numbering for retaining walls and sound wall sheets typically begin with BW1. Multiple sheets are typically numbered BW1, BW2, BW3, etc. Depending on the size and complexity of the project, different labels may be used to differentiate between retaining walls and sound walls, such as W for retaining walls and SW for sound walls.

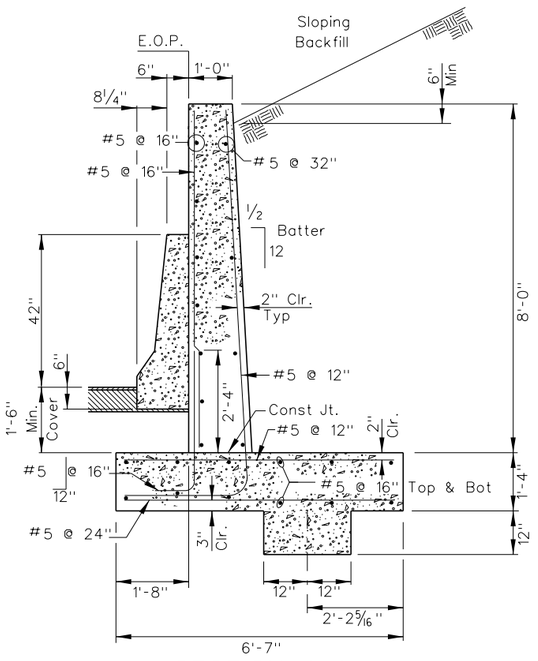
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(003)	LYON	BW1



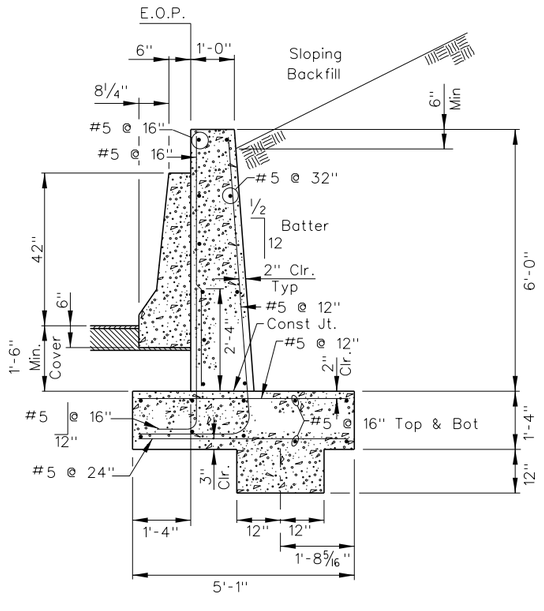
RETAINING WALL PLAN



ELEVATION



SECTION A-A

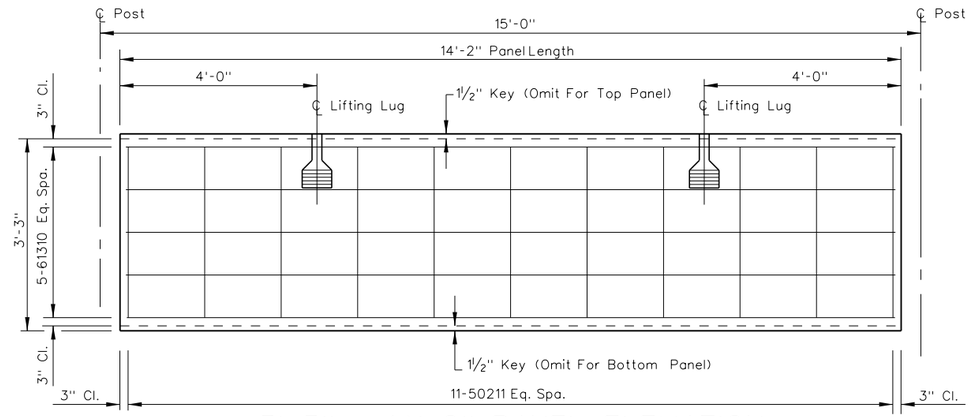


SECTION B-B

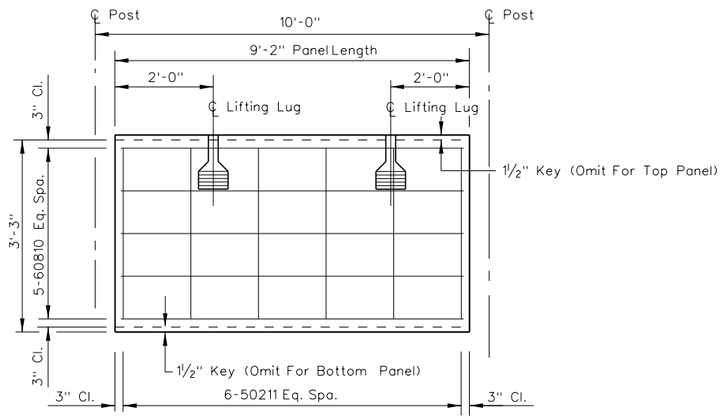
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL DETAILS

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(003)	LYON	BW2

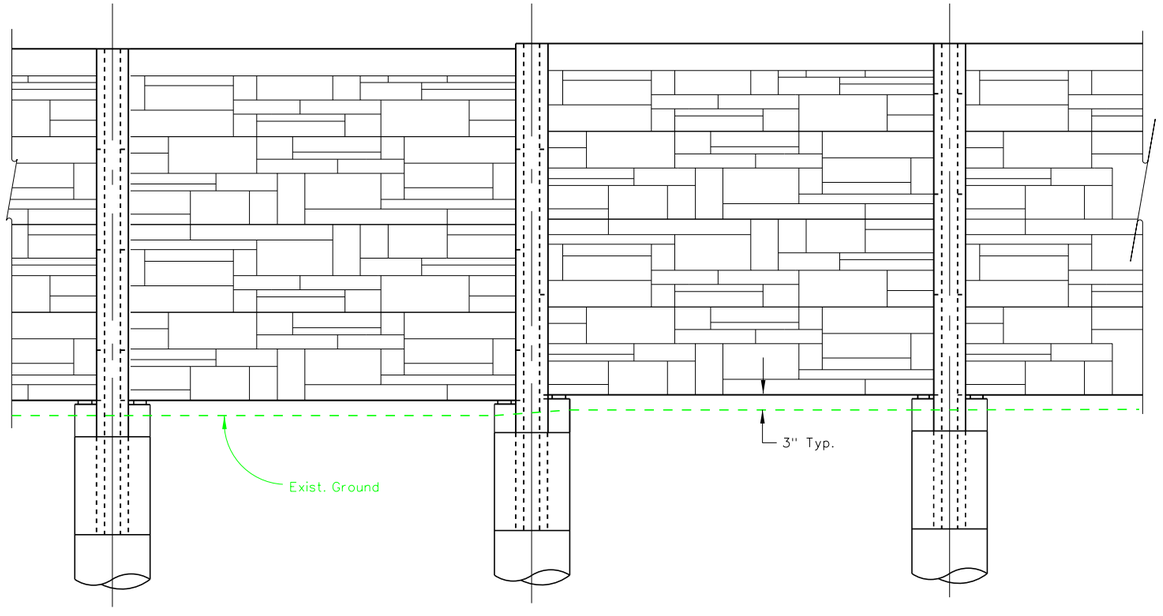


3'-3" x 14'-2" PANEL ELEVATION

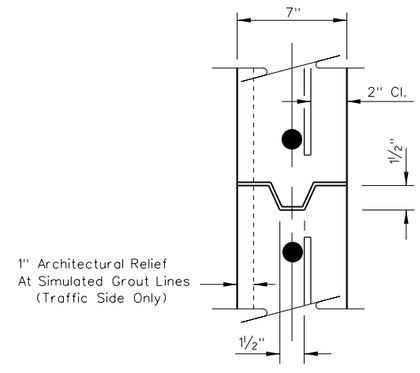


3'-3" x 9'-2" PANEL ELEVATION*

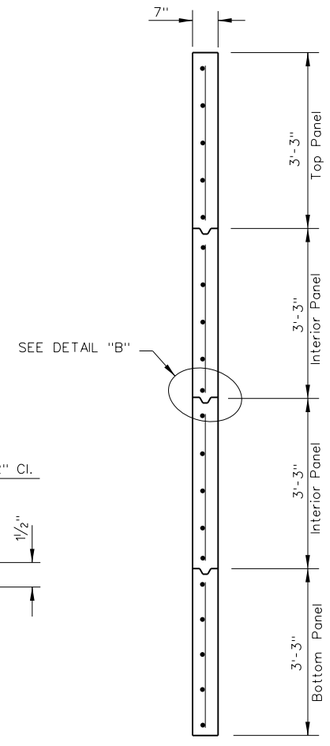
*SHORT PANEL



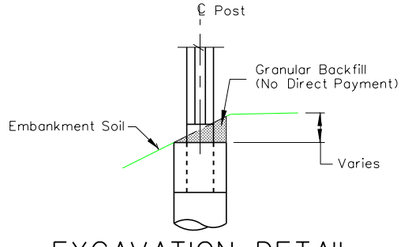
TYPICAL ELEVATION OF SOUND BARRIER WALL



DETAIL "B"



TYPICAL WALL SECTION



EXCAVATION DETAIL
WITHOUT SLOPE PAVING
(FOR SHAFT PLACEMENT)

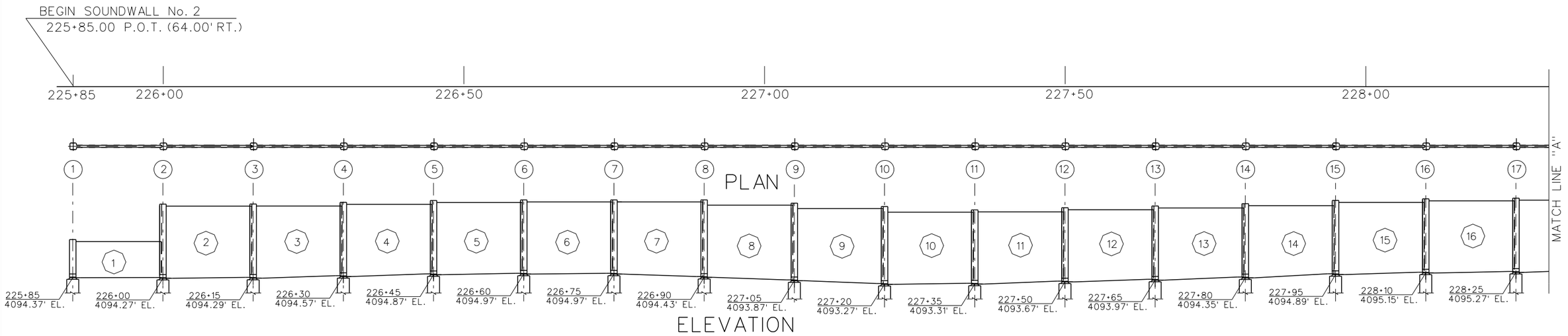
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

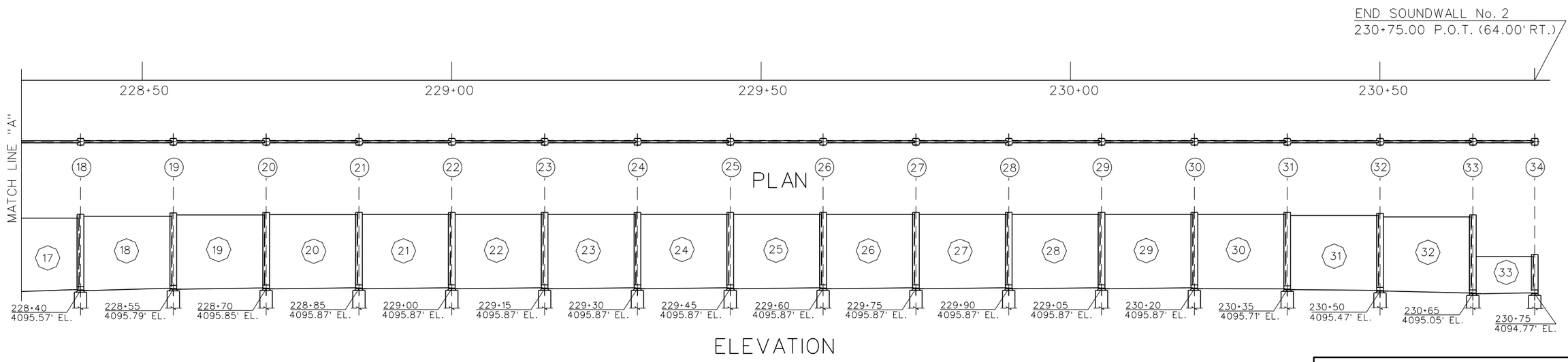
POST AND PANEL SOUNDWALL DETAILS

NOTE: ELEVATIONS SHOWN ARE BOTTOM OF WALL
FOR TOP OF SHAFT ELEV. SEE TABLE SHEET XXX

◯ – POST No. (SEE SHT. XXX)
⬡ – PANEL No. (SEE SHT. XXX)

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(003)	LYON	BW3

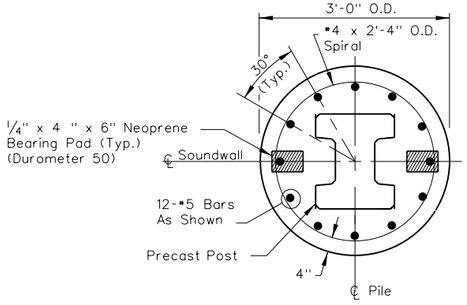




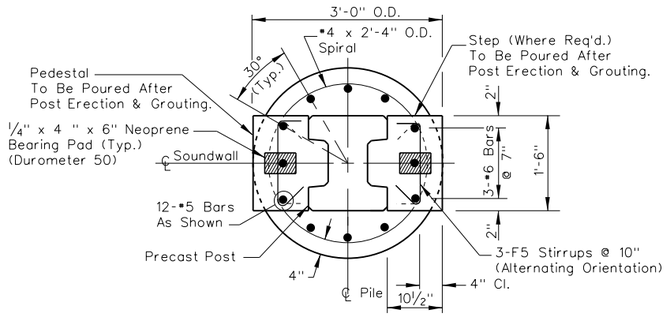
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

SOUNDWALL NO. 2

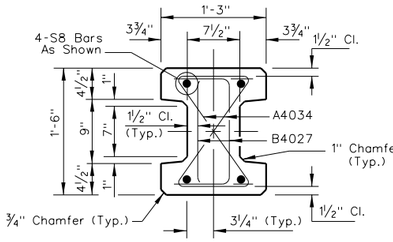
STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	NH-050-A(003)	LYON	BW4



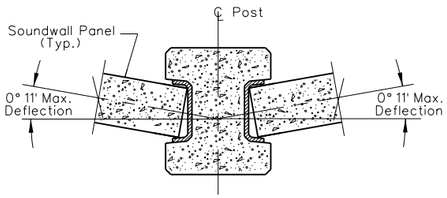
PLAN VIEW



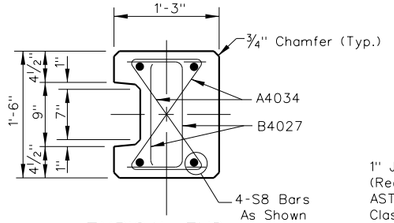
PLAN VIEW



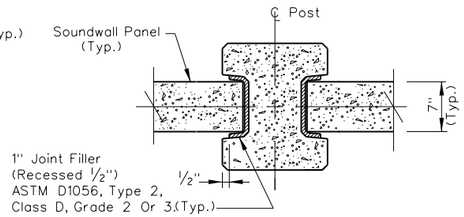
TYPICAL INTERIOR POST SECTION



TYPICAL PANEL INSTALLATION

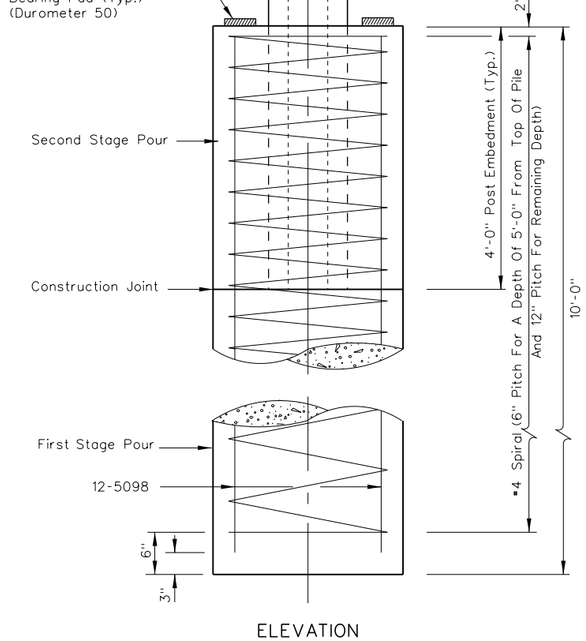


TYPICAL END POST SECTION



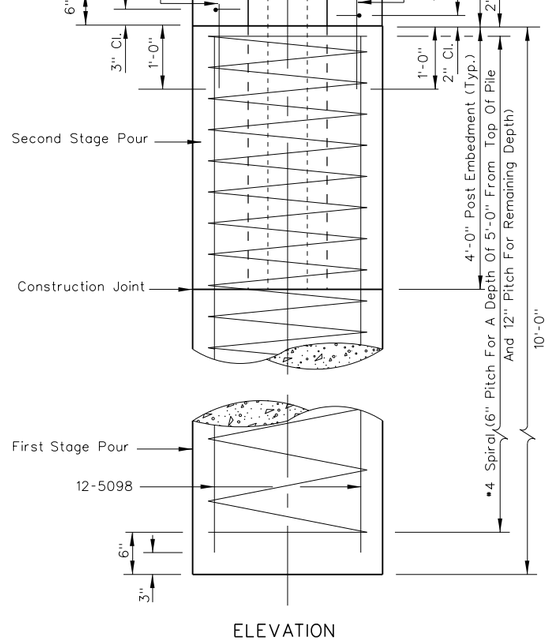
TYPICAL PANEL INSTALLATION

PRECAST POST DETAILS



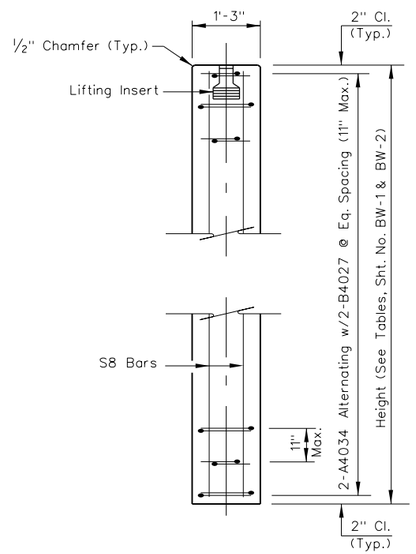
ELEVATION

TYP. 3'-0" DIA. C.I.D.H. PILE

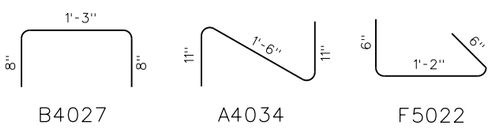


ELEVATION

TYP. 3'-0" DIA. C.I.D.H. PILE w/STEP



TYPICAL POST ELEVATION



BENT BARS

QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
212 1401	AESTHETIC PATTERNING	SQ.YD.	8638
502 0878	CONCRETE STAIN	SQ.YD.	17276
509 0036	DRILLED SHAFT FOUNDATION (36 INCH)	LIN.FT.	4080
640 0152	SOUND BARRIER WALL	SQ.FT.	77745

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

POST AND PANEL SOUNDWALL DETAILS

21.0 Structure List.

General. The structure list correlates specific construction work with the quantity for each pay item and lists the contract totals for these items. The structure list also contains necessary information to complete work at any location.

The structure list provides the most detailed breakdown of quantities in the contract. Quantities for each location and type of work are listed in a matrix of work units and construction notes. Work units are added to the structure list as required by the construction notes. The structure list provides the contract total for most work units. The quantities for drainage systems, landscaping, and structures are included in the structure list along with the appropriate roadway items.

The use of separate drainage, ITS, landscape, and other structure lists will be used when provided by the respective sections. These separate structure lists will follow the respective discipline's sheets in the plan set.

The structure list is available on SharePoint: https://nevadadot.sharepoint.com/sites/010/Shared Documents/Design/Structure List

Structure List Guidelines. The structure list shall be presented in the form of a chart with the units of work along the top and the plan notes along the right side. The associated quantities shall be placed in the grid cells where the top row of the plan note intersects with the appropriate work unit.

The last row on the structure list shall contain the contract totals for each pay item.

The tabulation of construction work is listed by project in order of increasing stationing along the mainline alignment. Each construction note is identified by stationing and includes a description of work to be done. Major items of work categories may also be used in structuring the list. When there is substantial work such as fencing, guardrail, curb, gutter and sidewalk, etc., it is acceptable to group these items of work and list them in order of stationing.

If one alignment identity heading is used for a series of construction notes, the identity may be omitted from the stationing. The main line sequence should continue through any interchange making the roadway notes read in consecutive order. Interchange notes should be grouped together and should include the appropriate alignment identity. Frontage roads should be treated similarly to interchanges.

Third parties responsible for participating in the cost of construction items should be identified in the associated note.

On federal aid contracts, all non-participating work (such as developer work) shall be indicated in the plans and noted in the structure list.

Miscellaneous work items to be noted in the structure list include utility cover adjustments, survey monuments to be perpetuated, work by others, features that are not to be disturbed, and improvements to permitted approaches.

When calculating lengths of reinforced concrete pipe (RCP), corrugated metal pipe (CMP), and oval metal arch pipe (OMAP), or other types of pipe, and the length is controlled by the distance between drainage structures, then the construction note for this pipe will include the exact length required. The associated quantity in the structure list will be boosted to the next foot greater than that indicated in the note. When calculating the exact pipe length for use in the construction note, measure from the inside wall of the first structure to the inside wall of the second structure. Be sure to account for any skew when calculating the exact pipe length.

Clear, concise, descriptive notes are important and should contain all information needed to accomplish the finished construction. Notes should be brief while conveying the message without possible misunderstanding by any of the parties involved. Associate the station limit(s) to each note, with the first station lining up with the first line of the note. Sheets with applicable details should be referenced. Do not be too general, redundant, or combine actions, instead, be specific and use separate sentences for each activity or work item:

"LE" 45+18 "LE" 44+72	CONSTRUCT 6' X 3' X 86' RCB FROM "LE" 45+18, 33.7' LT (UIE = 2431.17') TO "LE" 44+72, 38.8' RT (LIE = 2435.43'). CONSTRUCT TYPE 1 HEADWALL AT INLET AND OUTLET. CONSTRUCT CLASS 300 RIPRAP APRON AT INLET AND OUTLET. (SEE SHEET DP25).

Adjustment to utility covers should be consolidated into a separate area of the structure list. Notes pertaining to items such as guardrail, fencing, shoulder dikes, ditches, culverts, etc., may be shown in separate listings within the structure list when there is a large amount of notes under each item of work. These notes may be omitted from the plan sheets when the notes would clutter the plan sheets or placed on a note sheet following the plan sheet (see plan notes).

Work to be performed by utility companies other than the contractor, should be clearly noted on the structure list and include the name of the owner.

The following are types of work that are usually included in the structure list:

Removals, Approaches, Driveways, Islands, Wheel chair ramps, Retaining Walls, Fencing, Cattle Guards, Curb/Gutter, Sidewalk, Drainage Structures, Culverts, Guardrail, Barrier Rail, Loop Detectors, Valve and Manhole Covers, Landscaping, Fencing.

The following are types of work that are usually not in the structure list:

Traffic Control, Signals and Lighting, Signing, Striping, Base and Surface, Earthwork, Bridges.

21.0 Structure List (Continued).

Structure List Guidelines (Continued).

Terminology for Construction Notes	
Term	**Definition**
Adjust	To alter existing materials in accordance with the contract specifications. May require the replacement of some worn or broken components exposed during the operation.
Construct	To fabricate in place and on location. Use this for items such as drop inlets, sidewalk, headwalls, riprap basins, traffic islands, concrete traffic barriers and bridge structures.
Install	To properly set or fit prefabricated material into place. Use this for items such as culverts, pre-cast drop inlets, guardrail, object markers, end sections, pull boxes, poles and signs.
Place	To apply material using specialized labor or automated equipment. Use this for items such as surface courses, pavement markings and hydro seeding.
Reset	To construct, install or place in the same location using material salvaged and stockpiled in a prior operation.
Reconstruct	To construct in a new location using material salvaged and stockpiled in a prior operation.
Reinstall	To install in a new location using material salvaged and stockpiled in a prior operation.
Remove	To remove existing material and salvage or dispose of in accordance with the contract specifications.
Remove & reconstruct	To construct in a new location using material salvaged in the same general operation.
Remove and reinstall	To install in a new location using material salvaged in the same general operation.
Remove and replace	To place in a new location using material salvaged in the same general operation.
Remove and reset	To construct, install, or place in the same location using material salvaged from the same general operation.
Replace	To place in a new location using material salvaged and stockpiled in a prior operation.

Structure List Particulars.

1) Bid Items are to match the numbers that are contained in the current bidding system. The description of the bid item along with method of measurement is to be included, such as Plantmix Bituminous Shoulder Dikes; LINFT.

2) Plan notes from the structure list are to be placed on the plan sheets corresponding to the location of the work described in the note. On especially difficult and crowed situations, notes may be placed on a separate note sheet following the corresponding plan sheet.

3) Note numbers are assigned to each note sequentially starting with number 1 on each sheet. Note numbers are placed in the column next to the corresponding note on the structure list and in the plan sheets. Note number callouts are placed on plan sheets with leaders pointing to the location of the corresponding work.

4) Plan sheet callouts are placed in the description column to indicate the corresponding plan sheet that the work described in the notes appears on.

5) Sheet numbering for the roadway structure lists shall begin with S1. Multiple structure lists sheets shall be numbered S1, S2, S3, etc. Structure lists for other disciplines will be labeled as DS1 for drainage structure lists, LS1 for Landscape structure lists, TS1 for Signals, Lighting and ITS structure lists, etc. Refer to the discipline's section for more details.

6) Totals are the actual sum of the quantities that are added up at the end of the structure list. The accuracy for "Totals" is shown in the chart below.

Item	U. S. Standard Units	
	Unit	**Accuracy**
Base & Surface Aggregate	ton	1
Concrete	cuyd	0.01
Concrete, Elastomeric	cuft	0.01
Culverts, PVC Pipe	linft	1
Erosion Control, Clearing & Grubbing	acre	0.1
Fence, C & G, Barrier Rail	linft	1
Guardrail	linft	1
Painted Striping	mile	0.001
Pulverize Existing Surface	mile	0.001
Reinforcing Steel, Structural Steel and Grates	lb	1
Roadway and Borrow Excavation, Riprap	cuyd	1
Signs and Marking Film	sqft	0.01
Slope Paving, Sidewalks, Erosion Control	sqyd	0.1
Structure and Drainage Excavation, Backfill	cuyd	0.1
Trenching	sta	0.01

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	S1

STRUCTURE LIST

NOTE NO.	DESCRIPTION	STATION TO STATION
	NOTE: ALL LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER	
	SHEET 4	
1	CLEAR AND GRUB EMBANKMENT SLOPES AND DRILL SEED ALL DISTURBED SLOPES, LT. & RT.	"XE" 671+46.68 "LE" 395+95.00
2	CONSTRUCT MILLED RUMBLE STRIPS, LT.	"XE" 671+46.68 "LE" 395+95.00
3	CONSTRUCT MILLED RUMBLE STRIPS, RT.	"XE" 671+46.68 "LE" 395+95.00
	SHEET 6	
1	EXIST. 30" X 84.5' CMP. REMOVE END SECTION LT. EXTEND CULVERT 7' LT (30" X 91.5' CMP). INSTALL METAL END SECTION LT.	"LE" 140+50.00
2	INSTALL SPEED DECTOR LOOPS WITH MODIFIED TYPE 5 PULL BOX, LT. (SITE #0130182) CALL STEPHEN HELMS AT (775)888-7474 OR HIS CELL PHONE AT (775)720-6858. FIVE WORKING DAYS'/120-HOURS PRIOR TO THE CUTTING IN THE LOOPS FOR THE EXACT PLACEMENT.	"LE" 152+00.00
	SHEET 8	
1	EXIST. 48" X 83.5' CMP. REMOVE END SECTION LT. EXTEND CULVERT 5' LT (48" X 88.5' CMP). INSTALL METAL END SECTION LT.	"LE" 184+70.00
	SHEET 9	
1	EXIST. 36" X 91' CMP. REMOVE END SECTIONS LT AND RT. EXTEND CULVERT 13' LT AND 9' RT (36" X 113' CMP). INSTALL METAL END SECTIONS LT AND RT.	"LE" 205+00.00
2	EXIST. 36" X 114' CMP. REMOVE END SECTIONS LT AND RT. EXTEND CULVERT 14' LT AND 10' RT (36" X 138' CMP). INSTALL METAL END SECTIONS LT AND RT.	"LE" 215+00.00

	623 1820	623 0775	623 0232	618 0550	618 0400	618 0350	616 1000	610 0460	610 0190	610 0170	610 0053	610 0050	609 1040	608 0460	608 0350	608 0230	608 0150	604 2510	604 2475	604 2460	604 0700	604 0545	604 0470	603 1030	603 0170	502 0172	4030100	4020100	2110150	2070110	2060110	2021120	2020585	2020475	2020450	2010100
	3-INCH CONDUIT	LOOP DETECTOR	NO. 5 PULL BOX, MODIFIED	GALVANIZED GUARDRAIL (TRIPLE CORRUGATION)	GUARDRAIL- BARRIER RAIL CONNECTION (TRIPLE CORRUGATION)	GUARDRAIL TERMINAL (FLARED)	TYPE C-NV-4B FENCE	RIPRAP BEDDING,(CLASS 150)	RIPRAP (CLASS 300)	RIPRAP (CLASS 150)	GEOTEXTILE (CLASS 2)	GEOTEXTILE (CLASS 1)	STRUCTURAL STEEL GRATES	12-INCH METAL END SECTION (DOWNDRAIN)	12-INCH DOWNDRAIN PIPE	ANCHOR ASSEMBLY (12-INCH)	EMBANKMENT PROTECTOR, TYPE 5	48-INCH METAL END SECTION	36-INCH METAL END SECTION	30-INCH METAL END SECTION	48-INCH CORR. METAL PIPE (16 GAGE)	36-INCH CORR. METAL PIPE (16 GAGE)	30-INCH CORR. METAL PIPE (16 GAGE)	18-INCH PRECAST END SECTION	18-INCH REINFORCED CONCRETE PIPE, CLASS III	CONCRETE BARRIER RAIL (TYPE FA) (MODIFIED)	MILLED RUMBLE STRIPS	PLANTMIXING MISCELLANEOUS AREAS	SEEDING	GRANULAR BACKFILL	STRUCTURE EXCAVATION	REMOVAL OF CATTLE GUARD	REMOVAL OF FENCE	REMOVAL OF GUARDRAIL	REMOVE END SECTION	CLEARING AND GRUBBING
	LINFT	EACH	EACH	LINFT	EACH	EACH	LINFT	CUYD	CUYD	CUYD	SQYD	SQYD	POUND	EACH	LINFT	EACH	EACH	EACH	EACH	EACH	LINFT	LINFT	LINFT	EACH	LINFT	LINFT	MILE	SQYD	ACRE	CUYD	CUYD	EACH	LINFT	LINFT	EACH	LS
																													24.3							LS
																											5.7									
																											5.7									
	106	4	1																1		7								3.6	4.9				1		
																		1			5								4.1	6.6				1		
																			2		22								13.2	19.3				2		
																			2		24								14.4	21				2		

1 2 3 4 5

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-080-3(066)	HUMBOLDT	S5

STRUCTURE LIST

NOTE NO.	DESCRIPTION	STATION TO STATION	623 1820 3-INCH CONDUIT (LINFT)	623 0775 LOOP DETECTOR (EACH)	623 0232 NO. 5 PULL BOX, MODIFIED (EACH)	618 0550 GALVANIZED GUARDRAIL (TRIPLE CORRUGATION) (LINFT)	618 0400 GUARDRAIL- BARRIER RAIL CONNECTION (TRIPLE CORRUGATION) (EACH)	618 0350 GUARDRAIL TERMINAL (FLARED) (EACH)	616 1000 TYPE C-NV-4B FENCE (LINFT)	610 0460 RIPRAP BEDDING,(CLASS 150) (CUYD)	610 0190 RIPRAP (CLASS 300) (CUYD)	610 0170 RIPRAP (CLASS 150) (CUYD)	610 0053 GEOTEXTILE (CLASS 2) (SQYD)	610 0050 GEOTEXTILE (CLASS 1) (SQYD)	609 1040 STRUCTURAL STEEL GRATES (POUND)	608 0460 12-INCH METAL END SECTION (DOWNDRAIN) (EACH)	608 0350 12-INCH DOWNDRAIN PIPE (LINFT)	608 0230 ANCHOR ASSEMBLY (12-INCH) (EACH)	608 0150 EMBANKMENT PROTECTOR, TYPE 5 (EACH)	604 2510 48-INCH METAL END SECTION (EACH)	604 2475 36-INCH METAL END SECTION (EACH)	604 2460 30-INCH METAL END SECTION (EACH)	604 0700 48-INCH CORR. METAL PIPE (16 GAGE) (LINFT)	604 0545 36-INCH CORR. METAL PIPE (16 GAGE) (LINFT)	604 0470 30-INCH CORR. METAL PIPE (16 GAGE) (LINFT)	603 1030 18-INCH PRECAST END SECTION (EACH)	603 0170 18-INCH REINFORCED CONCRETE PIPE, CLASS III (LINFT)	502 0172 CONCRETE BARRIER RAIL (TYPE FA) (MODIFIED) (LINFT)	4030100 MILLED RUMBLE STRIPS (MILE)	4020100 PLANTMIXING MISCELLANEOUS AREAS (SQYD)	2110150 SEEDING (ACRE)	2070110 GRANULAR BACKFILL (CUYD)	2060110 STRUCTURE EXCAVATION (CUYD)	2021120 REMOVAL OF CATTLE GUARD (EACH)	2020585 REMOVAL OF FENCE (LINFT)	2020475 REMOVAL OF GUARDRAIL (LINFT)	2020450 REMOVE END SECTION (EACH)	2010100 CLEARING AND GRUBBING (LS)
	SHEET 17																																							
1	EXIST. 30" X 84' CMP. REMOVE END SECTIONS LT AND RT. EXTEND CULVERT 13' LT AND 6' RT (36" X 103' CMP). INSTALL METAL END SECTIONS LT AND RT.	"LE" 373+00.00																				2			19							9.6	13.3				2	
2	EXIST. 30" X 83' CMP. REMOVE END SECTIONS LT AND RT. EXTEND CULVERT 10' LT AND 5' RT (36" X 98' CMP). INSTALL METAL END SECTIONS LT AND RT.	"LE" 378+00.00																				2			15							7.6	10.5				2	
Total			126	8	3	62	2	2	350	7	60	10	50	92	490	2	40	2	2	1	9	7	5	76	55	4	64	3469	11.4	240	24.3	103	160.7	2	635	3994	17	LS

22.0 Miscellaneous Information.

General. This section contains the following information:

- Examples of Sheet Revisions
- Station ties to main line ramps, detours and frontage roads.
- Public land surveys.
- Surveyed or Base Line
- Typical angle measurement.
- Methods of showing right of way and control of access.
- North arrow placement.
- Direction of lettering on layout sheets.
- Standard lettering sizes and text weights.

CONTRACT

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	1

INDEX OF SHEETS

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

CLARK AND NYE COUNTIES

FROM IR 15 & IR 515 AT THE DOWNTOWN EXPRESSWAY INTERCHANGE IN LAS VEGAS WESTERLY & NORTHERLY, THEN NORTHWESTERLY TO SR 374 BEATTY

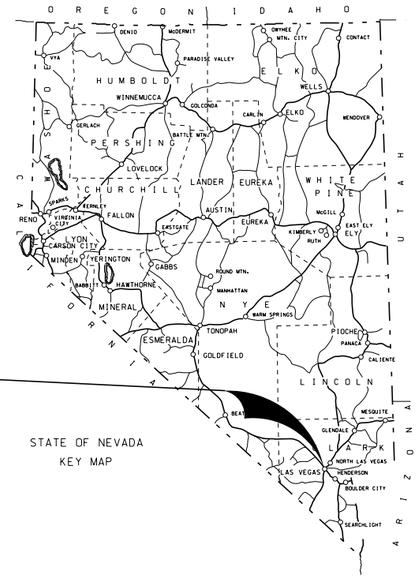
DESIGN CRITERIA

2010 NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION
2011 AASHTO "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS"
2009 MUTCD
2011 AASHTO ROADSIDE DESIGN GUIDE
2010 NDOT ROAD DESIGN GUIDE

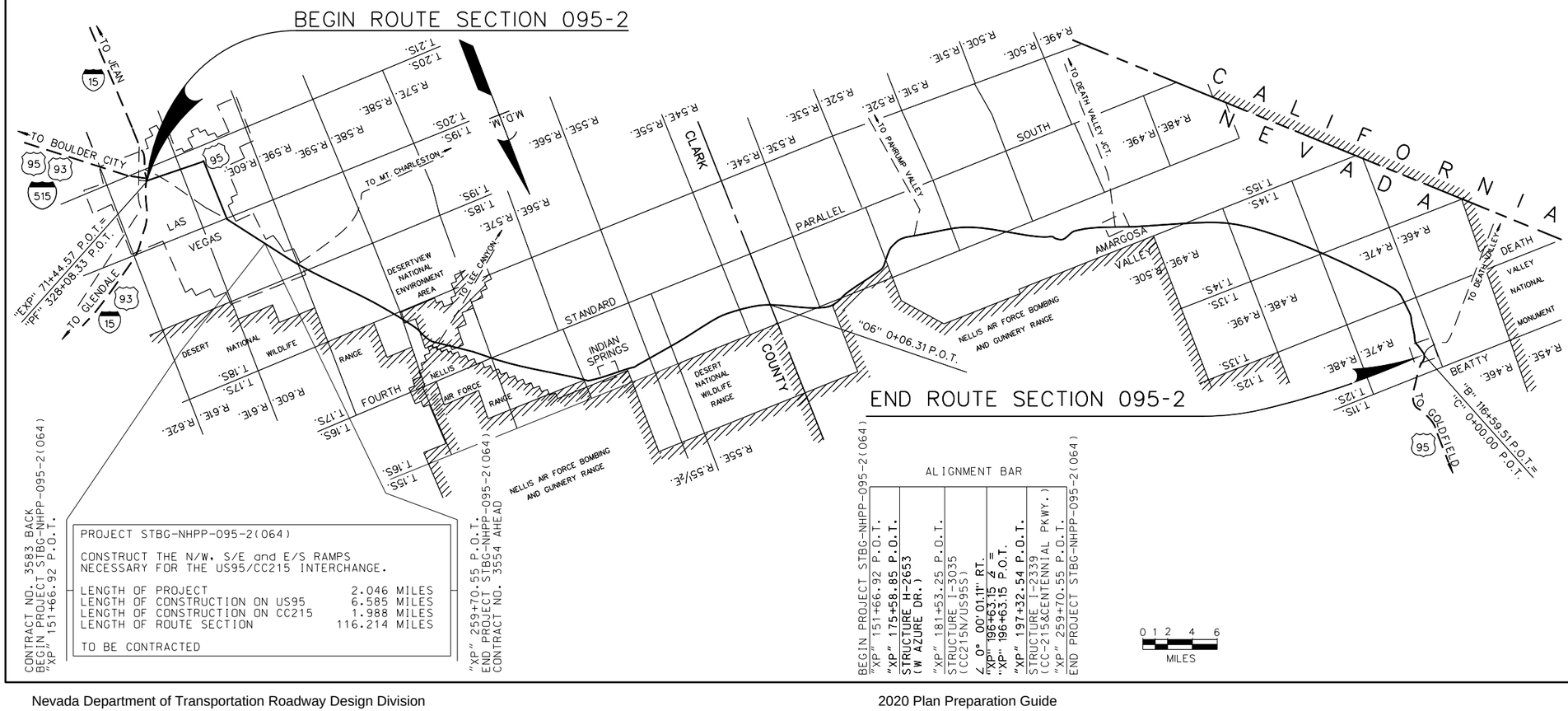
DESIGN DESIGNATION

AADT 2015	109,000
AADT 2035	180,000
D	56.5%
DHV	8500
T(DHV)	5.0%
V	70 MPH

PROJECT STBG-NHPP-095-2(064)
US 95-CL 88.00



STATE OF NEVADA
KEY MAP



PROJECT STBG-NHPP-095-2(064)

CONSTRUCT THE N/W, S/E and E/S RAMPS NECESSARY FOR THE US95/CC215 INTERCHANGE.

LENGTH OF PROJECT	2.046 MILES
LENGTH OF CONSTRUCTION ON US95	6.585 MILES
LENGTH OF CONSTRUCTION ON CC215	1.988 MILES
LENGTH OF ROUTE SECTION	116.214 MILES

TO BE CONTRACTED

CONTRACT NO. 3583 BACK
BEGIN PROJECT STBG-NHPP-095-2(064)
"XP" 151+66.92 P.O.T.

"XP" 259+70.55 P.O.T.
END PROJECT STBG-NHPP-095-2(064)
CONTRACT NO. 3554 AHEAD

ALIGNMENT BAR

BEGIN PROJECT STBG-NHPP-095-2(064)
"XP" 151+66.92 P.O.T.
"XP" 175+58.85 P.O.T.
STRUCTURE H-2653
(W AZURE DR.)
"XP" 181+53.25 P.O.T.
STRUCTURE I-3035
(CC215N/US95S)
∠ 0° 00' 01.11" RT.
"XP" 196+63.15 Z =
"XP" 196+63.15 P.O.T.
"XP" 197+32.54 P.O.T.
STRUCTURE I-2339
(CC-215&CENTENNIAL PKWY.)
"XP" 259+70.55 P.O.T.
END PROJECT STBG-NHPP-095-2(064)

0 1 2 4 6
MILES

REV. 5	2-1-19	SHEETS	3F, 7, 16, 17, 35, 35A, D2A, D3, HS1-HS13
REV. 4	1-25-19	SHEETS	16, 17
REV. 3	1-7-19	SHEETS	12,13, S5, S11
REV. 2	9-18-18	SHEETS	11, ST8
REV. 1	9-4-18	SHEETS	3F, 29,30

APPROVED JANUARY 11, 2018

RUDY MALFABON, P.E., DIRECTOR, DEPT. OF TRANSPORTATION

GOVERNOR BRIAN SANDOVAL
CHAIRMAN, TRANSPORTATION BOARD

SUMMARY OF EARTHWORK QUANTITIES

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	3F

1 REVISED 9-4-2018

5 REVISED 2-1-2019

LOCATION	SIDE	ROADWAY EXCAVATION	SELECT BORROW	BORROW EMBANKMENT	NOTES
"AE" 39+88.39 to "AE" 47+19.29	BOTH	312.51 CUYD		7,653.77 CUYD	SEE SHEET SP3
"AW" 37+01.85 to "AW" 47+80.68	BOTH	1,047.41 CUYD		9,942.36 CUYD	
"AW" 38+00.00 to "AW" 42+73.44	BOTH	443.51 CUYD		443.51 CUYD	0" TO 21" REMOVAL OF EXISTING STRUCTURAL SECTION, SEE SHEET SP3
"EN" 13+81.92 to "EN" 25+94.90	BOTH			82,806.62 CUYD	SEE SUMMARY OF GEOFOAM FILL (THIS PAGE) AND SHEET G1-G5
"ES" 15+55.07 to "ES" 20+66.00	BOTH			28,965.24 CUYD	SEE SUMMARY OF GEOFOAM FILL (THIS PAGE) AND SHEET G1-G5
"ES" 24+20.33 to "ES" 29+99.80	BOTH	302.38 CUYD		9,750.30 CUYD	
"NE" 6+00.77 to "NE" 11+64.40	BOTH	371.89 CUYD		375.44 CUYD	
"NE" 11+64.40 to "NE" 12+00.00	RT	67.60 CUYD		0.13 CUYD	
"NE" 23+50.65 to "NE" 24+85.83	LT	4.06 CUYD			BASE OF BARRIER RAIL ALONG "NE" @ "NE"/"SE" GORE
"NE" 26+61.05 to "NE" 39+99.28	LT	571.30 CUYD		125.73 CUYD	
"NE" 12+00.00 to "NE" 28+14.34	RT	15,611.52 CUYD		884.19 CUYD	EMBANKMENT ONLY WIDENIING, SEE SHEETS 35 AND 35A
"NW" 12+48.00 to "NW" 12+86.20	RT	1.14 CUYD			BASE OF BARRIER RAIL ALONG SKY POINTE DR.
"NW" 21+23.04 to "NW" 30+00.49	BOTH	1,131.95 CUYD		3,046.32 CUYD	
"NW" 56+88.51 to "NW" 66+73.05	BOTH	33.02 CUYD		72,739.99 CUYD	
"R1" 11+50.00 to "R1" 17+30.00	BOTH	1,269.08 CUYD		293.84 CUYD	
"SE" 16+94.47 to "SE" 31+26.50	BOTH	7,241.10 CUYD		5,992.58 CUYD	
"SE" 48+34.50 to "SE" 62+95.86	BOTH	23,177.13 CUYD		8,084.44 CUYD	
"XP" 151+66.94 to "XP" 171+57.64	RT	620.23 CUYD		1,282.10 CUYD	
"XP" 190+94.83 to "XP" 194+03.57	RT	14.21 CUYD			BASE OF BARRIER RAIL IN MEDIAN
"XP" 195+44.87 to "XP" 196+26.76	LT	3.77 CUYD			BASE OF BARRIER RAIL ALONG CDSB
"XP" 198+62.08 to "XP" 201+76.77	RT	14.49 CUYD			BASE OF BARRIER RAIL IN MEDIAN
"XP" 220+23.35 to "XP" 259+70.55	LT	9,028.40 CUYD		158.20 CUYD	
"NW" ABUTMENT 1	BOTH		3,400.65 CUYD		
"NW" ABUTMENT 2	BOTH		5,523.02 CUYD		
"SE" ABUTMENT 1	BOTH		3,183.19 CUYD		
"SE" ABUTMENT 2	BOTH		2,869.51 CUYD		
"ES" ABUTMENT 1	BOTH		9,455.95 CUYD		
"ES" ABUTMENT 2	BOTH		2,109.02 CUYD		
EXIST. "NW" RAMP REMOVAL	BOTH	23,469.00 CUYD			SEE SHEET SP1
PARK AND RIDE REMOVAL	BOTH	21,611.00 CUYD			SEE SHEET SP2
EXIST. US95 SB ON RAMP REMOVAL	BOTH	8,660.10 CUYD			SEE SHEET SP4
ANN RD. RAMP METER				3.15 CUYD	SEE SHEET 36
TOTAL		**115,006.80 CUYD**	**26,541.34 CUYD**	**232,547.91 CUYD**	

SUMMARY OF COLD MILLINGS

0.75" MILLINGS GENERATED	5,430 TONS
MILLINGS TO BE USED FOR RAP	3,513 TONS

SUMMARY OF URBAN CLEARING

PARK AND RIDE REMOVAL	13.75 Acres
PROJECT IMPROVEMENT FOOTPRINT	28.20 Acres
TOTAL	42 Acres

SUMMARY OF GEOFOAM FILL (SEE SHEET G1-G5)

UNDER "EN"	
"GF" 11+35.00 TO "GF" 13+09.53	581 CUYD
UNDER "ES"	
"GF" 13+09.54 TO "GF" 18+55.00	10,130 CUYD
TOTAL	10,711 CUYD

GEOMEMBRANE

TOTAL	5,101 SQYD

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	SPSR-0593(003)	CLARK	6

- LEGEND -

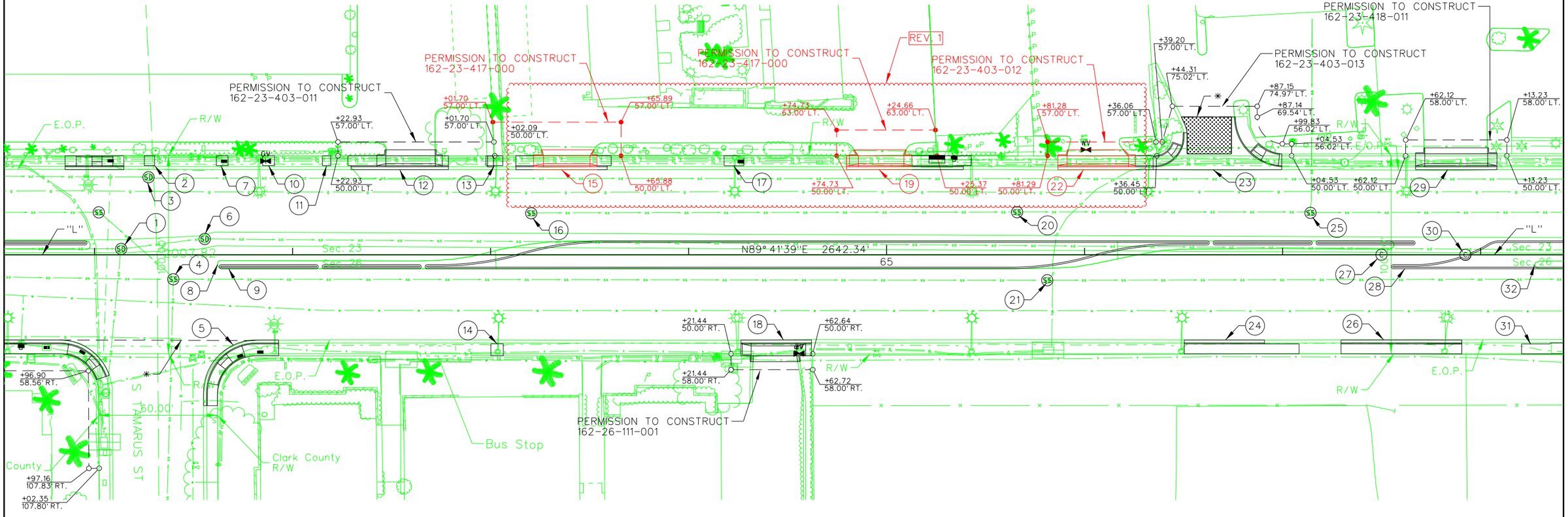
- LIMITS OF PLANTMIXING MISCELLANEOUS AREAS

* - LIMITS OF PAVING

NOTES:

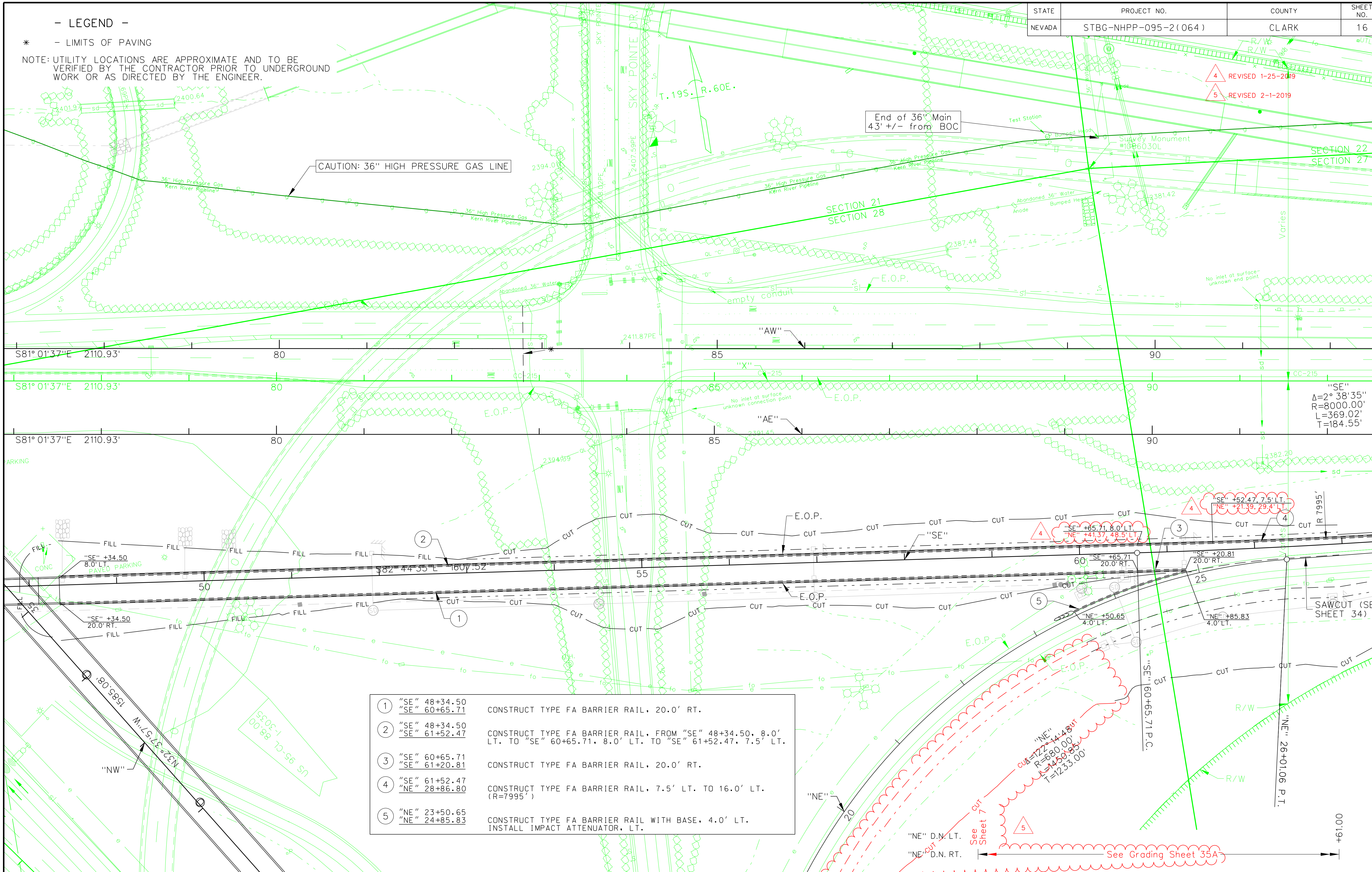
- ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE.
- CONTACT CCWRD INSPECTIONS @ 702-668-8205 48 HOURS PRIOR TO ANY WORK ON CCWRD FACILITIES.
- CAUTION: HIGH PRESSURE GAS! CALL SOUTHWEST GAS AT 702-651-2111 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.
- SEE SLI PLANS FOR ADDITIONAL PULLBOX WORK.

T.21S R.61E



Know what's below. Call before you dig.

REV	DATE	DESCRIPTION
REV 1.	4/25/2019	DRIVEWAY CHANGED FROM TYPE 8 ROLLED CURB TO RESIDENTIAL DRIVEWAY METHOD B.


- LEGEND -
* - LIMITS OF PAVING
NOTE: UTILITY LOCATIONS ARE APPROXIMATE AND TO BE VERIFIED BY THE CONTRACTOR PRIOR TO UNDERGROUND WORK OR AS DIRECTED BY THE ENGINEER.
STATE
NEVADA
PROJECT NO.
STBG-NHPP-095-2(064)
COUNTY
CLARK
SHEET NO.
16
REVISED 1-25-2019
REVISED 2-1-2019
CAUTION: 36" HIGH PRESSURE GAS LINE
End of 36" Main 43' +/- from BOC
SECTION 21
SECTION 28
SECTION 22
SECTION 27
T.19S. R.60E.
SKY POINTE DR.
S81° 01'37"E 2110.93'
"SE"
Δ=2° 38'35"
R=8000.00'
L=369.02'
T=184.55'
"NE"
Δ=122°14'48"
R=680.00'
L=1450.85'
T=1233.00'
"SE" 60+65.71 P.C.
"NE" 26+01.06 P.T.
SAWCUT (SEE SHEET 34)
See Grading Sheet 35A
See Sheet 7
"NE" D.N. LT.
"NE" D.N. RT.
US 95-CL 88.00 I-5035
N32°37'57"W 1585.08'
1 "SE" 48+34.50 "SE" 60+65.71 CONSTRUCT TYPE FA BARRIER RAIL, 20.0' RT.
2 "SE" 48+34.50 "SE" 61+52.47 CONSTRUCT TYPE FA BARRIER RAIL, FROM "SE" 48+34.50, 8.0' LT. TO "SE" 60+65.71, 8.0' LT. TO "SE" 61+52.47, 7.5' LT.
3 "SE" 60+65.71 "SE" 61+20.81 CONSTRUCT TYPE FA BARRIER RAIL, 20.0' RT.
4 "SE" 61+52.47 "NE" 28+86.80 CONSTRUCT TYPE FA BARRIER RAIL, 7.5' LT. TO 16.0' LT. (R=7995')
5 "NE" 23+50.65 "NE" 24+85.83 CONSTRUCT TYPE FA BARRIER RAIL WITH BASE, 4.0' LT. INSTALL IMPACT ATTENUATOR, LT.

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	HS1

HYDRAULIC STRUCTURE LIST

2 Revised 6/18/2018

3 Revised 1/10/2019

5 Revised 2/1/2019

						RIPRAP BEDDING,(CLASS 300)	RIPRAP BEDDING,(CLASS 150)	RIPRAP (CLASS 300)	RIPRAP (CLASS 150)	GEOTEXTILE (CLASS 2)	GEOTEXTILE (CLASS 1)	ABANDON PIPE	STRUCTURAL STEEL GRATES	CASTINGS	TYPE 4 MANHOLE (MODIFIED)	TYPE 2 MANHOLE (MODIFIED)	TYPE 1 MANHOLE (MODIFIED)	CONNECT TO EXISTING MANHOLE	12-INCH DOWNDRAIN PIPE	ANCHOR ASSEMBLY (12-INCH)	EMBANKMENT PROTECTOR, TYPE 5-2G	EMBANKMENT PROTECTOR, TYPE 5	12-INCH METAL END SECTION	36-INCH PRECAST END SECTION	24-INCH PRECAST END SECTION	18-INCH PRECAST END SECTION	15-INCH PRECAST END SECTION	36-INCH REINFORCED CONCRETE PIPE, CLASS III	30-INCH REINFORCED CONCRETE PIPE, CLASS III	24-INCH REINFORCED CONCRETE PIPE, CLASS III	18-INCH REINFORCED CONCRETE PIPE, CLASS III	15-INCH REINFORCED CONCRETE PIPE, CLASS III	REINFORCING STEEL (DOWELED)	REINFORCING STEEL	CLASS D CONCRETE, MODIFIED (MAJOR)	CLASS A CONCRETE (MINOR)	SLURRY CEMENT BACKFILL	GRANULAR BACKFILL	STRUCTURE EXCAVATION	BORROW EMBANKMENT	DRAINAGE EXCAVATION	REMOVAL OF SLOTTED DRAIN	REMOVAL OF DROP INLET	REMOVAL OF HEADWALL	REMOVAL OF MANHOLE	RESET END SECTIONS	REMOVE END SECTION	REMOVAL OF CULVERT PIPE	REMOVAL OF PORTION OF REINFORCED CONCRETE BOX CULVERT	NOTE NO.	DESCRIPTION	STATION TO STATION
						610 0470	610 0460	610 0190	610 0170	610 0053	610 0050	609 1410	609 1040	609 1030	609 0420	609 0390	609 0380	609 0290	608 0350	608 0230	608 0170	608 0150	604 2395	603 1090	603 1050	603 1030	603 1020	603 0350	603 0290	603 0230	603 0170	603 0140	505 0110	505 0100	502 0970	502 0720	207 0150	207 0110	206 0110	203 0230	203 0160	202 1231	202 1040	2020530	2021035	2020455	2020450	2020285	2020270			
						CUYD	CUYD	CUYD	CUYD	SQYD	SQYD	LINFT	POUND	POUND	EACH	EACH	EACH	EACH	LINFT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LINFT	LINFT	LINFT	LINFT	LINFT	POUND	POUND	CUYD	CUYD	CUYD	CUYD	CUYD	CUYD	LINFT	EACH	EACH	EACH	EACH	EACH	LINFT	LINFT			
													574																						81		1.85		7.3	10.9															
																		1													66						26.0	63.8															
													574																						82		1.87		7.4	11.1															
																															4						1.6	6.1															
													842																						86		1.90		6.4	10.3															
																															72						28.3	54.4															
													842																						83		1.83		6.1	9.8															
																															142						55.8	82.8															
													842																						79		1.76		5.8	9.3															
																															115						45.2	62.8															
													842																						79		1.76		5.8	9.3															
																															149						58.6	76.9															
													842																						78		1.73		5.7	9.1															
																															122						48.0	63.1															
													1329																						94		2.13		8.6	12.9															

NOTE NO.	DESCRIPTION	STATION TO STATION
	NOTE: ALL LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER	
	SHEET D1	
1	CONSTRUCT TYPE 2 (DOUBLE GRATE) DROP INLET 114.5' RT	"XP" 151+70
	(GRATE ELEV. = 2372.57', H = 4.93', A = 2.50'). INSTALL 18" X 66'	
	RCP (UIE = 2367.64', LIE = 2365.43'). CONNECT TO EXISTING	
	DROP INLET "XP" 151+01, 115.7' RT. (SEE SHEET DP1).	
2	CONSTRUCT TYPE 2 (DOUBLE GRATE) DROP INLET 106.8' RT	"XP" 151+70
	(GRATE ELEV. = 2372.79', H = 5.01', A = 2.50'). INSTALL 18" X 4'	
	RCP (UIE = 2367.78', LIE = 2367.74'). CONNECT TO DROP INLET	
	"XP" 151+70, 114.5' RT. (SEE SHEET DP1).	
3	CONSTRUCT TYPE 2 (TRIPLE GRATE) DROP INLET 105.8' RT	"XP" 152+44
	(GRATE ELEV. = 2373.39', H = 3.52', A = 2.50'). INSTALL 18" X 72'	
	RCP (UIE = 2369.87', LIE = 2367.88'). CONNECT TO DROP INLET	
	"XP" 151+70, 106.8' RT. (SEE SHEET DP1).	
4	CONSTRUCT TYPE 2 (TRIPLE GRATE) DROP INLET 105.8' RT	"XP" 153+88
	(GRATE ELEV. = 2374.71', H = 3.32', A = 2.50'). INSTALL 18" X 142'	
	RCP (UIE = 2371.39', LIE = 2369.97'). CONNECT TO DROP INLET	
	"XP" 152+44, 105.8' RT. (SEE SHEET DP1).	
5	CONSTRUCT TYPE 2 (TRIPLE GRATE) DROP INLET 107.0' RT	"XP" 155+05
	(GRATE ELEV. = 2375.75', H = 3.11', A = 2.50'). INSTALL 18" X 115'	
	RCP (UIE = 2372.64', LIE = 2371.49'). CONNECT TO DROP INLET	
	"XP" 153+88, 105.8' RT. (SEE SHEET DP1).	
6	CONSTRUCT TYPE 2 (TRIPLE GRATE) DROP INLET 109.3' RT	"XP" 156+56
	(GRATE ELEV. = 2377.33', H = 3.10', A = 2.50'). INSTALL 18" X 149'	
	RCP (UIE = 2374.23', LIE = 2372.74'). CONNECT TO DROP INLET	
	"XP" 155+05, 107.0' RT. (SEE SHEET DP1).	
7	CONSTRUCT TYPE 2 (TRIPLE GRATE) DROP INLET 111.2' RT	"XP" 157+80
	(GRATE ELEV. = 2378.59', H = 3.04', A = 2.50'). INSTALL 18" X 122'	
	RCP (UIE = 2375.55', LIE = 2374.33'). CONNECT TO DROP INLET	
	"XP" 156+56, 109.3' RT. (SEE SHEET DP1).	
8	REMOVE EXISTING DROP INLET 116.6' RT.	"XP" 159+01
9	CONSTRUCT TYPE 2 (DOUBLE GRATE) MODIFIED DROP INLET	"XP" 159+05
	112.5' RT (GRATE ELEV. = 2379.57', H = 5.94', A = 5.00').INSTALL	
	36" X 6' RCP (UIE = 2373.63', LIE = 2373.62'). CONNECT EXISTING	
	30" RCP AND 36" RCP AND CONNECT TO EXISTING PIPE.	

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	T8

(1) MODIFY (E) SERVICE PEDESTAL, TO BE PAID FOR UNDER BID ITEM 623 1635 "MODIFY ELECTRICAL SERVICE", EACH. SEE SERVICE PEDESTAL SCHEDULE FOR DETAILS.

(2) INSTALL OVERHEAD SIGN LIGHTING AND LUMINAIRE RETRIEVAL SYSTEM. OVERHEAD SIGN LIGHTING TO BE PAID FOR UNDER BID ITEM 623 0495 "SIGN LIGHTING FIXTURE, LED", EACH. LUMINAIRE RETRIEVAL SYSTEM TO BE PAID FOR UNDER BID ITEM 623 2670 "LUMINAIRE RETRIEVAL SYSTEM", EACH. SEE PERMANENT SIGNING (TS) SHEETS FOR SIGN AND STRUCTURE DETAILS - SIGN NUMBER 22. (1)

(R1) REMOVE (E) 08a PULL BOX, TO BE PAID FOR UNDER BID ITEM 202 0925 "REMOVAL OF PULL BOX", EACH. REPLACE (E) PULL BOX WITH A (N) PULL BOX, TO BE PAID FOR UNDER BID ITEM 623 0225 "NO. 3-1/2 PULL BOX", EACH. SEE PULL BOX SCHEDULE FOR DETAILS.

(RR1) REMOVE AND RESET (E) LIGHT POLE, TO BE PAID FOR UNDER BID ITEM 623 1445 "REMOVE AND RESET LIGHT POLE", EACH. SEE LIGHT POLE SCHEDULE FOR DETAILS.

SCALE: 1" = 100'

0 25 50 100

ft

MATCHLINE "XP" 183+02 SEE SHEET T7

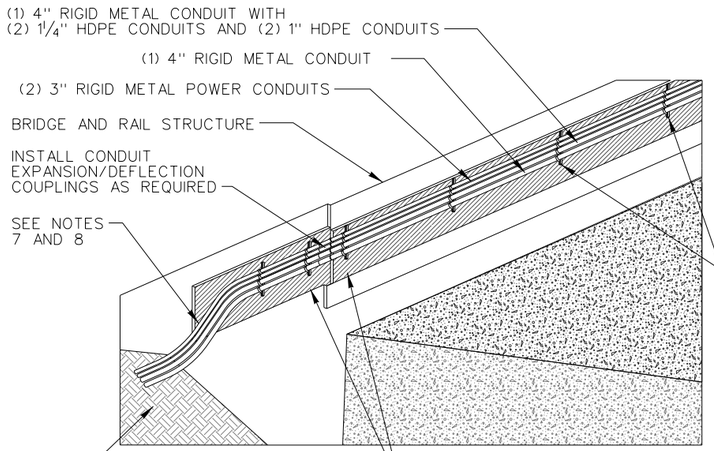
REVISION #:	REVISION DATE:	REVISED BY:
REV. 1	06/14/2018	FBT

- ALTERED NOTE 2 REGARDING OVERHEAD SIGN LIGHTING

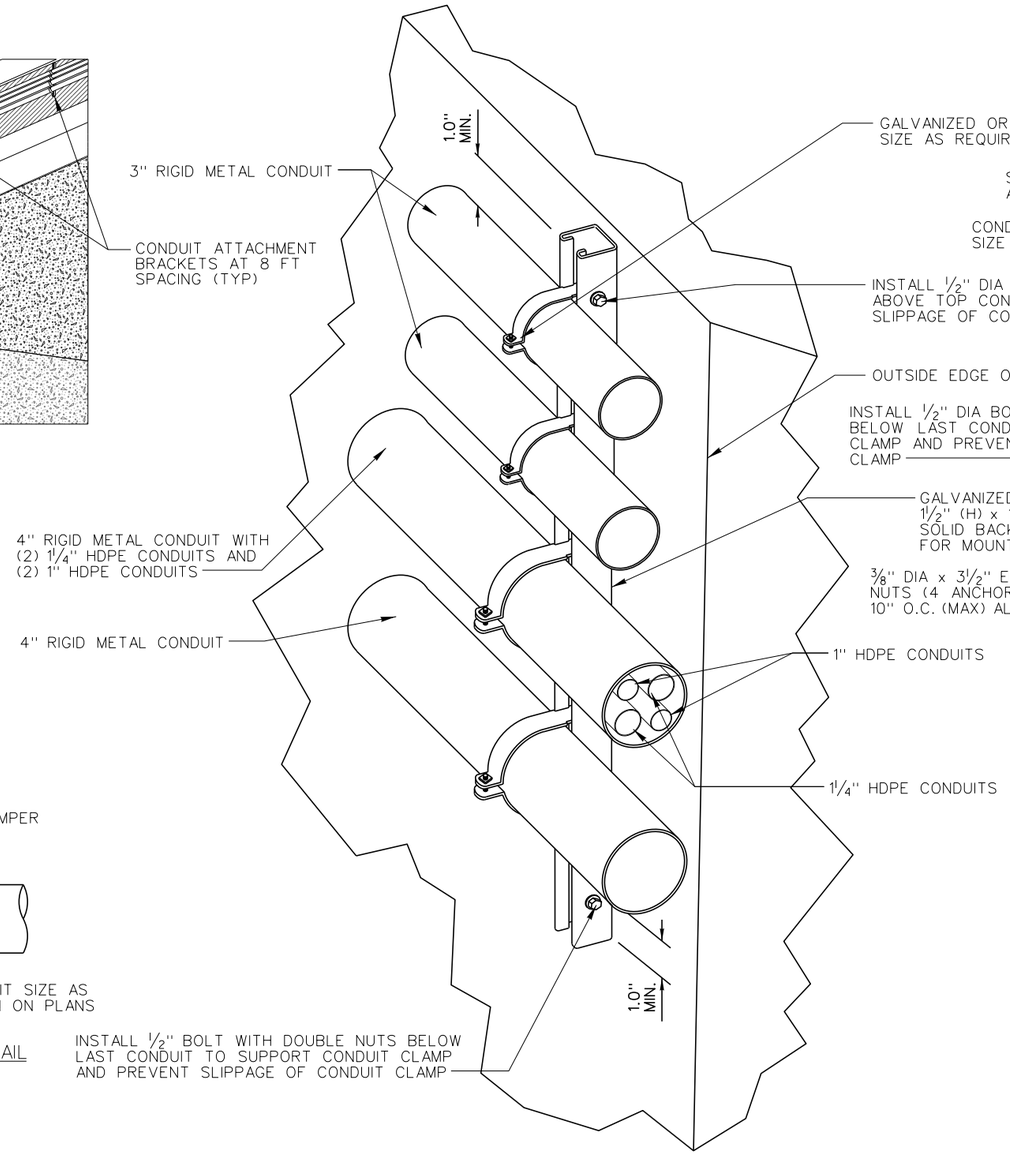
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

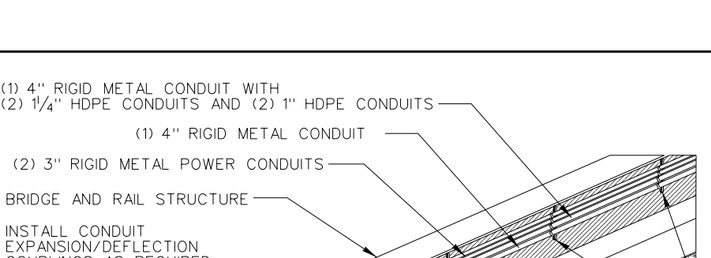
LIGHTING

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	T64

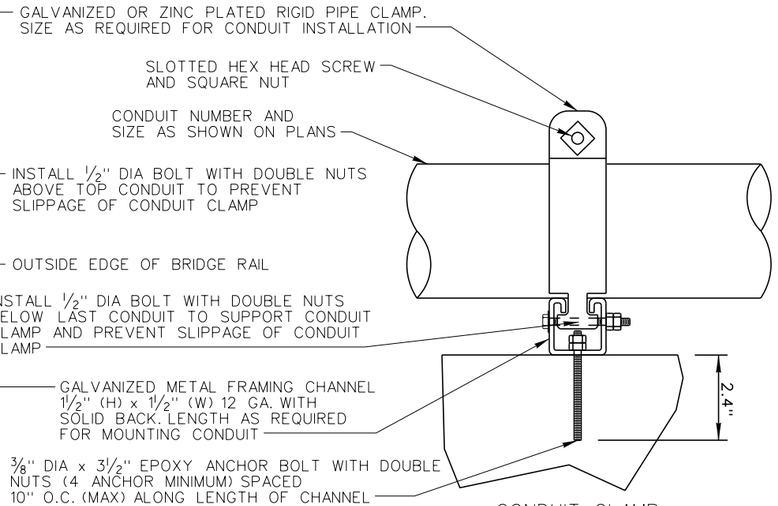


TYPICAL BRIDGE CONDUIT TRANSITION DETAIL
NTS





TYPICAL EXPANSION/DEFLECTION COUPLING DETAIL
NTS



CONDUIT CLAMP
TOP VIEW
NTS

NOTES:

1. EXPANSION/DEFLECTION COUPLINGS SHALL BE INSTALLED FOR ALL RIGID METAL CONDUITS AT ALL BRIDGE EXPANSION JOINTS OR AS DIRECTED BY THE RESIDENT ENGINEER. EXPANSION/DEFLECTION COUPLINGS SHALL MEET THE REQUIREMENTS OF THE NDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, OR AS REQUIRED TO MATCH EXPANSION JOINT MOVEMENT. THIS INCLUDES 4" RMC WITH FOUR HDPE CONDUITS INSIDE. HDPE CONDUIT DOES NOT REQUIRE EXPANSION/DEFLECTION COUPLINGS
2. CONDUIT ATTACHMENT BRACKET SPACING FOR RIGID METAL CONDUITS SHALL BE 8 FEET MAXIMUM OR LESS FOR DISTANCE BETWEEN RIGID METAL CONDUIT SUPPORTS
3. CONDUIT ATTACHMENT BRACKET IS REQUIRED WITHIN 3½ FEET OF EACH SIDE OF JUNCTION BOXES AND CONDUIT BENDS, DEPENDING ON TRANSITION OF CONDUIT
4. CONDUIT ATTACHMENT BRACKET IS REQUIRED WITHIN 18 INCHES OF EACH SIDE OF ALL EXPANSION/DEFLECTION COUPLINGS
5. EACH RIGID METAL CONDUIT SHALL HAVE INDEPENDENT EXPANSION/DEFLECTION COUPLINGS AND CLAMPS
6. PULL TAPE SHALL BE INSTALLED INSIDE ALL EMPTY CONDUITS
7. CONDUIT BEND RADIUS SHALL BE 36" OR GREATER
8. FLEXIBLE BENDS AND CONDUIT SHALL NOT BE USED
9. METAL CONDUIT ATTACHED TO STRUCTURE TO BE PAID FOR UNDER BID ITEMS 623-1825 "3-INCH CONDUIT (METAL)", LINFT AND 623-1835 "4-INCH CONDUIT (METAL)", LINFT. ALL WORK AND HARDWARE NECESSARY TO ATTACH THE CONDUIT IS INCIDENTAL TO THE BID ITEMS (NO DIRECT PAYMENT). CONDUIT AND HARDWARE SHALL BE PAINTED TO MATCH EXISTING STRUCTURE (NO DIRECT PAYMENT). 1

REVISION #:	REVISION DATE:	REVISED BY:
REV. 1	06/14/2018	FBT
– ALTERED NOTE 9 REGARDING SUSPENDED CONDUIT		

CONDUIT TO RAIL ATTACHMENT DETAIL
NTS

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

BRIDGE CONDUIT STRUCTURE MOUNT DETAIL

STATE	PROJECT NO.	COUNTY	SHEET NO.
NEVADA	STBG-NHPP-095-2(064)	CLARK	T98

GENERAL NOTES:

1. ASCERTAIN THAT THE LOCATIONS OF ALL CABINETS, POLES, PULL BOXES, CONDUITS, AND ANY OTHER HARDWARE ARE NOT IN CONFLICT WITH EXISTING UTILITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL EXISTING UTILITIES. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATIONS OF THEIR INSTALLATIONS 72 HOURS PRIOR TO CONSTRUCTION. REFER TO SUBSECTION 107.17 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REGARDING ADDITIONAL RESPONSIBILITY FOR UTILITIES.
3. CONDUIT RUNS AS SHOWN ON PLANS ARE FOR GRAPHIC PURPOSES ONLY; EXACT LOCATIONS WILL BE STAKED IN THE FIELD.
4. ALL WORK WILL BE DONE IN NDOT RIGHT-OF-WAY.
5. ALL CONDUCTORS AND FIBER OPTIC CABLES TO BE ABANDONED SHALL BE REMOVED. VERIFY ALL CONDUCTORS AND FIBER OPTIC CABLES THAT ARE ABANDONED FOR TYPE, SIZE, AND QUANTITY PRIOR TO REMOVAL. CONDUIT SHOULD BE ABANDONED IN PLACE. (NO DIRECT PAYMENT)
6. ALL WORK SHALL BE INCOMPLIANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
7. CONDUCTOR AND CONDUIT SIZES AND LOCATIONS ARE APPROXIMATE. MATCH EXISTING FIELD CONDITIONS.
8. VERIFY ALL LOCATIONS OF EXISTING SIGNAL, LIGHTING, ITS AND ASSOCIATED HARDWARE (TO INCLUDE, BUT NOT LIMITED TO, CABINETS, POLES, PULL BOXES, CONDUITS, AND METERED SERVICES) AS NOTED ON PLANS.
9. CONTRACTOR SHALL MAINTAIN AND KEEP OPERATIONAL ALL EXISTING SIGNAL, LIGHTING, AND ITS INFRASTRUCTURE WITHIN THE CONSTRUCTION LIMITS. IF ANY EXISTING INFRASTRUCTURE IS DAMAGED DUE TO CONSTRCUTION, THE CONTRACTOR SHALL IMMEDIATELY CONTACT NDOT DISTRICT 1.

GENERAL ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND AND AERIAL UTILITIES AND STRUCTURES.
2. THE CONTRACTOR SHALL REPAIR IN KIND ALL SURFACE MATERIALS THAT ARE DISTURBED BY TRENCHING, EXCAVATION, BACKFILLING, AND SIMILAR OPERATIONS. THIS SHALL INCLUDE, BUT IS NOT LIMITED TO, THE REPLACEMENT OF PAVEMENT, SIDEWALK, CURB AND GUTTER, FENCING, DRAINAGE INLETS AND SYSTEMS, AND OTHER UTILITIES.
3. ALL WIRE AND CABLE SHALL RUN TERMINAL TO TERMINAL WITHOUT SPLICING, UNLESS OTHERWISE SPECIFIED OR AS DIRECTED BY THE ENGINEER.
4. EACH POLE SHALL BE INDIVIDUALLY GROUNDED, THEN BONDED TO GROUNDING CONDUCTOR BY AN APPROVED METHOD. (NO DIRECT PAYMENT)
5. EACH PULL BOX COVER SHALL BE INDIVIDUALLY GROUNDED, THEN BONDED TO GROUNDING CONDUCTOR BY AN APPROVED METHOD. (NO DIRECT PAYMENT)
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK REQUIRED BY NV ENERGY. THE CONTRACTOR SHALL CONTACT NV ENERGY REGARDING PRIMARY SERVICE LOCATIONS, TRANSFORMER LOCATIONS, AND SECONDARY SERVICE CONDUIT.
7. INSTALLATION OF ELECTRICAL SERVICE EQUIPMENT, CONDUITS, PULL BOXES, AND CONDUCTORS FROM THE NEW SERVICE PEDESTAL TO THE NV ENERGY SERVICE TRANSFORMER SHALL SATISFY THE REQUIREMENTS OF NV ENERGY.
8. THE CONTRACTOR IS RESPONSIBLE FOR GROUNDING THE ENTIRE ELECTRICAL SYSTEM INCLUDING, BUT NOT LIMITED TO, ALL EXISTING PULL BOXES AND POLES.

CONDUIT NOTES:

1. CONTRACTOR SHALL COORDINATE UNDERGROUND UTILITY CONFLICTS. CONDUIT SHALL BE INSTALLED ABOVE CONFLICTING UTILITY IF CONFLICTING UTILITY IS AT LEAST 30" FROM THE SURFACE. CONDUIT SHALL BE INSTALLED BELOW CONFLICTING UTILITY IF CONFLICTING UTILITY IS LESS THAN 30" BELOW THE SURFACE.
2. ALL CONDUIT ENDS SHALL BE SEALED WITH A DUCT SEALING COMPOUND. USE NSIINDUSTRIES DUCT SEALING COMPOUND OR AN APPROVED EQUAL. (NO DIRECT PAYMENT)

PULL BOX NOTES:

1. PROVIDE TRAFFIC RATED PULL BOXES (HS20 RATED).
2. ADJUST PULL BOX LOCATIONS IN THE FIELD AS REQUIRED AND AS DIRECTED BY THE ENGINEER.
3. LABEL ALL PULL BOXES (EXCEPT NV ENERGY PULL BOXES) "FAST". (NO DIRECT PAYMENT)
4. ALL METAL PULL BOX LIDS SHALL BE GROUNDED. INSTALL A STRANDED #4 (GREEN, 7-STRAND) THW WIRE – 8 FEET IN LENGTH – FROM THE LID TO THE BONDING GROUND. FASTEN THE #4 CONDUCTOR TO THE LID BY CAD WELDING. ALL CONDUITS SHALL HAVE A MINIMUM OF 6 INCHES OF CLEARANCE FROM THE TOP OF THE CONDUIT TO THE LID. (NO DIRECT PAYMENT)
5. PROVIDE LOCKING BARS ON NEW PULL BOXES AS SHOWN IN THE PLANS. (NO DIRECT PAYMENT)

CABINET NOTES:

1. FURNISH AND INSTALL ITS CABINETS PER NDOT SPECIFICATIONS AND STANDARDS. CABINETS SHALL MEET NTS SPECIFICATIONS. CABINETS SHALL CONTAIN POWER DISTRIBUTION ASSEMBLY, POWER DISTRIBUTION PANEL, SHELVES AND OTHER EQUIPMENT AND ACCESSORIES AS NEEDED. ITS CABINET SHALL BE PAID FOR UNDER BID ITEM 623-1061 "COMMUNICATION CABINET", EACH.
2. ADJUST CABINET LOCATIONS IN THE FIELD AS REQUIRED AND AS DIRECTED BY THE ENGINEER.
3. FURNISH, INSTALL, AND MAKE OPERATIONAL A FIELD HARDENED ETHERNET SWITCH (FHES) ON ALL NEW AND EXISTING CABINETS, AS SHOWN IN THE PLANS. THE FHES INSTALLATION, INCLUDING, BUT NOT LIMITED TO, ALL NECESSARY CABLES, CONNECTORS, HARDWARE, AND TESTING TO BE PAID FOR UNDER BID ITEM 623-1261, "FIELD HARDENED ETHERNET SWITCH", EACH.
4. FURNISH, INSTALL, AND MAKE OPERATIONAL A VIDEO ENCODER FOR ALL CABINETS WITH A CCTV CAMERA, AS SHOWN IN THE PLANS. TO BE PAID FOR UNDER BID ITEM 623-1262, "VIDEO ENCODER", EACH.

POLE NOTES:

1. ADJUST THE POLE LOCATIONS IN THE FIELD AS REQUIRED AND AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL HIGH MAST POLES', CAMERA POLES', AND SIGNAL POLES' FOUNDATIONS. DESIGNS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
3. THE MANUFACTURER OF THE LOWERING AND RAISING DEVICE SYSTEM USED ON THE PROJECT SHALL SUPPLY ALL DRAWINGS, INSTALLATION INSTRUCTIONS, MAINTENANCE MANUALS AND TECHNICAL INFORMATION REQUIRED FOR A COMPLETE OPERATING ASSEMBLY. TO INCLUDE A FACTORY REPRESENTATIVE IN ATTENDANCE AT INSTALLATION AND INITIAL OPERATIONS OF THE DEVICES FOR EACH POLE AND ALSO CONDUCT A FOUR HOUR TRAINING SESSION SHALL BE INCLUDED IN THE UNIT PRICE. SHALL BE PAID FOR UNDER BID ITEM 623-2310, "HIGH MAST STEEL POLE, 100-FOOT", EACH OR BID ITEM 623-2315, "HIGH MAST STEEL POLE, 120-FOOT", AND BID ITEM 623-0670 "HIGH MAST HEAD FRAME ASSEMBLY", EACH. "ITS POLE(80 FOOT)", EACH.
4. REMOVE LIGHT POLES AND PULL BOXES AS INDICATED IN THE PLANS. SALVAGE POLES AND LUMINAIRES TO DISTRICT 1 YARD. CONTACT THE ENGINEER 72 HOURS PRIOR TO DELIVERING EQUIPMENT. SHALL BE PAID FOR UNDER BID ITEM 623-1375, "REMOVAL OF POLE" OR BID ITEM 202-0925, "REMOVAL OF PULLBOX", EACH.
4. INSTALL CAMERAS ON 80' ITS POLES. SHALL BE PAID FOR UNDER BID ITEM 623-3030, "CCTV CAMERA (PTZ)", EACH.
5. INSTALL LOWERING DEVICE FOR CAMERAS ON 80' ITS POLES. SHALL BE PAID FOR UNDER BID ITEM 623-2950, "CCTV LOWERING DEVICE (HIGH MAST)", EACH.
6. INSTALL 80' ITS POLES WHERE INDICATED ON THE PLANS. SHALL BE PAID FOR UNDER BID ITEM 623-0658, "ITS POLE (80 FOOT)", EACH.

SERVICE NOTES:

1. INSTALL NEW METERED SERVICE PEDESTAL FOR UNDERGROUND ELECTRICAL SERVICE AT:

   SP2 "X" 37+38 109' RT
   SP4 "XP" 203+23 617' RT
   SP5 "ES" 31+37 140' RT

2. THE ELECTRICAL SERVICE INSTALLATION – INCLUDING ALL REQUIRED BREAKERS, WIRING, HARDWARE AND TESTING – SHALL BE PAID FOR UNDER BID ITEM 623-1620 "UNDERGROUND ELECTRICAL SERVICE", EACH. ADJUST THE EXACT LOCATION IN THE FIELD AS DIRECTED BY THE ENGINEER.
3. MODIFY EXISTING METERED SERVICE PEDESTAL AT:

   SP3 "SE" 30+41 67' LT
   SP7 "NW" 15+04 53' RT
   SP8 "XP" 229+50 188' LT
   SP9 "XP" 258+00 128' RT
   SP10 "XP" 127+10 397' RT

4. THE ELECTRICAL SERVICE MODIFICATION – INCLUDING ALL REQUIRED BREAKERS, WIRING, HARDWARE AND TESTING – SHALL BE PAID FOR UNDER BID ITEM 623-1635 "MODIFY ELECTRICAL SERVICE", EACH.
5. SEE SERVICE PEDESTAL AND SERVICE PANEL SCHEDULES FOR DETAILS.

DMS NOTES:

1. WAKWAYS AND SAFETY RAILINGS ARE REQUIRED ON ALL DMS STRUCTURES. SEE SHEET T-36.1.1 THROUGH T-36.1.12 OF NDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION FOR DETAILS.
2. WALKWAY AND SAFETY RAILINGS ON DMS STRUCTURES SHALL START AT THE ACCESS DOOR EDGE OF THE DMS AND EXTEND LATERALLY, TOWARDS THE SUPPORT POLE FACING THE DMS ACCESS DOOR, TO A POINT IN LINE WITH THE PROJECTED VERTICAL SURFACE OF THE ROADWAY BARRIER FURTHEST FROM THE ROAD.
3. FOR THE DYNAMIC MESSAGE SIGNS AT "AE" 17+44 57' RT AND "XS1e" 262+50 65' LT, DMS ACCESS DOOR SHALL BE LOCATED ON THE RIGHT-HAND SIDE OF THE SIGN.

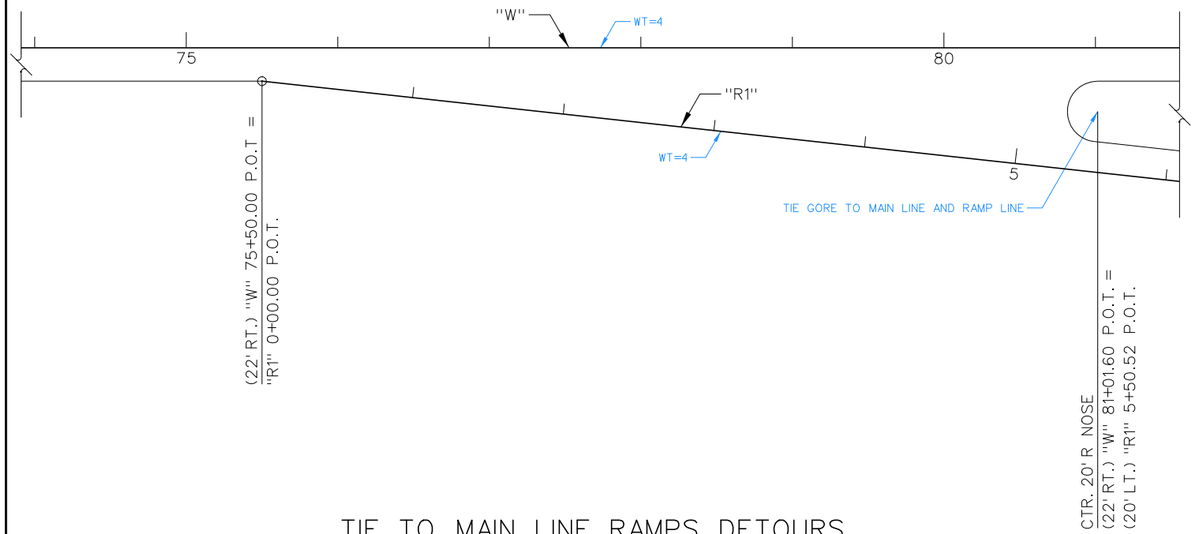
LUMINAIRES:

1. SEE NDOT STANDARD SPECIFICATIONS AND NDOT SPECIAL PROVISIONS FOR ADDITIONAL LIGHTING REQUIREMENTS.
2. LUMINAIRES SHALL BE CONTROLLED FROM THE PHOTOCELL LOCATED IN THE SERVICE PEDESTAL. HOWEVER, IF LUMNAIRES ARE CONNNECTED TO EXISTING LIGHTING CIRCUITS, LUMINAIRES SHALL BE CONTROLLED THE SAME WAY AS THE LUMINAIRES ON THE EXISTING LIGHTING CIRCUIT (INDIVIDUAL PHOTOCELLS OR SERVICE PEDESTAL PHOTOCELL).
3. OVERHEAD SIGN LIGHTING LUMINAIRE SHALL BE PAID FOR UNDER BID ITEM 623-0495 "SIGN LIGHTING FIXTURE, LED", EACH. CONTRACTOR SHALL FURNISH AND INSTALL NEW LED LUMINAIRES AS INDICATED ON THE PLANS. LED LUMINAIRES SHALL BE TYPE III MEDIUM DISTRIBUTION, 9,000 LUMEN (± 5%) OUTPUT, 650 mA (± 25%) CONSTANT LUMEN OUTPUT (CLO) DRIVER AT 4000 K (± 300 K) COLOR TEMPERATURE STREET LIGHT OR APPROVED EQUIVALENT. CLO DRIVER SHALL BE SET AT THE FACTORY TO 70% LIGHT OUPUT AND INCREASE 1.5% EACH 4,400 HOURS. NEW LUMINAIRE SHALL HAVE A 10 YEAR WARRANTY.

REVISION #:	REVISION DATE:	REVISED BY:
REV. 1	06/14/2018	FBT
– ALTERED, AND ADDED, VARIOUS NOTES		

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

PLAN NOTES



TIE TO MAIN LINE RAMPS, DETOURS, TEMP. CONNECTIONS & FRONTAGE ROADS

THE DIVISION OF A TYPICAL TOWNSHIP INTO NUMBERED SECTIONS

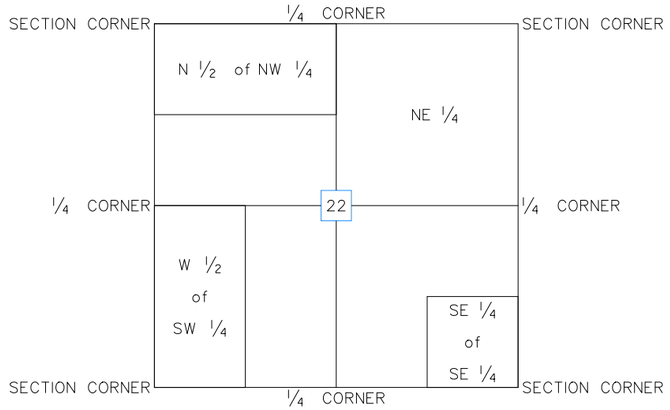
TOWNSHIP LINE (N & S)

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

RANGE LINE (E & W) — RANGE LINE (E & W)

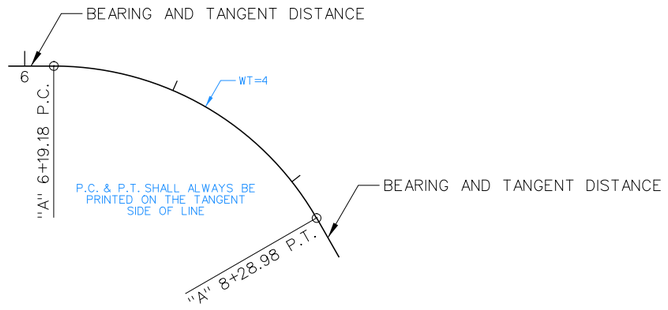
TOWNSHIP LINE (N & S)

TYPICAL SUBDIVISION OF A SECTION

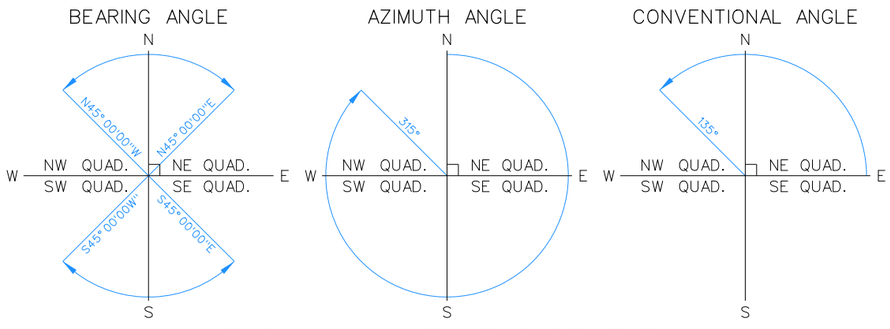


A TYPICAL SECTION CONTAINS ONE SQ. MILE OR 640 ACRES

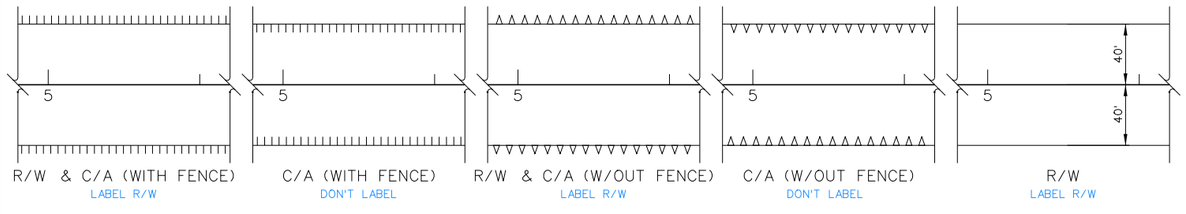
PUBLIC LAND SURVEYS



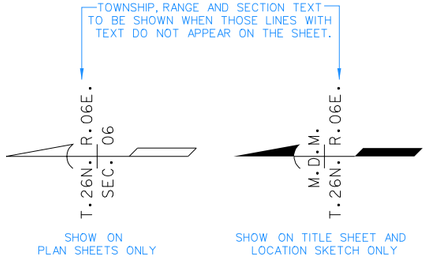
SURVEYED OR BASE LINE



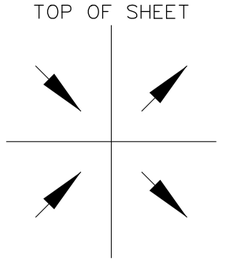
TYPICAL ANGLE MEASUREMENT



METHODS OF SHOWING RIGHT OF WAY AND CONTROL OF ACCESS



NORTH ARROW PLACEMENT



DIRECTION OF LETTERING ON LAYOUT SHEETS

NOTE: TO CALCULATE TEXT SIZES FOR ENGLISH PLOT SCALES NOT SHOWN, USE THE FOLLOWING METHOD.

(PLOT SCALE) X (LEROY SIZE) / (2000) = TEXT SIZE

EXAMPLE:
WHAT IS THE EXTRA LARGE TEXT SIZE FOR A FINAL SCALED PLOT OF 1" = 4000'?

4000 X 240/2000 = 480
EXTRA LARGE TEXT SIZE = 480

Standard Lettering Sizes and Text Weights (11 x 17 Plots)

Weight	2	2	2	3	4	5
Size	Extra Small	Small	Medium	Large	Extra Large	2X Large
Leroy	*100*	*120*	*140*	*175*	*240*	*290*
English Plot Scale 1"= FT						
1	0.0500	0.0600	0.0700	0.0875	0.1200	0.1450
2	0.1000	0.1200	0.1400	0.1750	0.2400	0.2900
3	0.1500	0.1800	0.2100	0.2625	0.3600	0.4350
4	0.2000	0.2400	0.2800	0.3500	0.4800	0.5800
5	0.2500	0.3000	0.3500	0.4375	0.6000	0.7250
6	0.300	0.360	0.420	0.525	0.720	0.870
8	0.400	0.480	0.560	0.700	0.960	1.160
10	0.500	0.600	0.700	0.875	1.200	1.450
20	1.00	1.20	1.40	1.75	2.40	2.90
30	1.50	1.80	2.10	2.625	3.60	4.35
40	2.00	2.40	2.80	3.50	4.80	5.80
50	2.50	3.00	3.50	4.375	6.00	7.25
60	3.00	3.60	4.20	5.25	7.20	8.70
80	4.00	4.80	5.60	7.00	9.60	11.60
100	5.00	6.00	7.00	8.75	12.00	14.50
200	10.00	12.00	14.00	17.50	24.00	29.00
300	15.00	18.00	21.00	26.25	36.00	43.50
400	20.00	24.00	28.00	35.00	48.00	58.00
500	25.00	30.00	35.00	43.75	60.00	72.50
600	30.00	36.00	42.00	52.50	72.00	87.00
1000	50.00	60.00	70.00	87.50	120.00	145.00