

LAX  
PROJECT ID: 5997-00-41  
WITH:

NOVEMBER 2022  
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
<del>Section No.</del>	<del>8</del>	<del>Computer Earthwork Data</del>
Section No.	9	Cross Sections

TOTAL SHEETS = 134

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

## C PRAIRIE DU CHIEN, VILLA LOUIS ROAD BLACKHAWK AVENUE TO TERMINI LOC STR CRAWFORD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5997-00-41	WISC 2023074	1

STATE PROJECT NUMBER  
5997-00-41

END PROJECT 5997-00-41  
STA 40+00

BEGIN PROJECT 5997-00-41  
STA 2+36



DESIGN DESIGNATION

A.A.D.T. (2023)	= 550
A.A.D.T. (2043)	= 660
D.H.V.	= 12%
D.D.	= 60/40
T.	= 8%
DESIGN SPEED	= 30 MPH
ESALS	= 190,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE



R-7-W CITY OF PRAIRIE DU CHIEN R-5-W

LAYOUT  
SCALE 0 1/2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.711 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, CRAWFORD COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

CITY OF PRAIRIE DU CHIEN  
APPROVED BY THE CITY  
DATE: 07/26/22  
*Chad Abram* City Administrator  
Signature Title

ORIGINAL PLANS PREPARED BY  
vierbicher  
planners | engineers | advisors  
REEDSBURG - MADISON - PRAIRIE DU CHIEN  
126 West Blackhawk Avenue Prairie du Chien, Wisconsin 53821  
Phone: (608) 326-1051 Fax: (608) 326-1052



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor VIERBICHER  
Designer VIERBICHER  
Project Manager BRANDAN BURGER, PE  
Regional Examiner SW REGION  
Regional Supervisor KYLE HEMP, PE

APPROVED FOR THE DEPARTMENT  
7/27/2022  
DATE: Brandan Burger  
[Signature]

E

GENERAL NOTES:

- 1. CONTACT THE UTILITIES AND DIGGERS HOTLINE TO LOCATE AND FIELD VERIFY UTILITIES PRIOR TO THE START OF WORK. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. ANY LOCAL, MUNICIPAL OR OTHER UTILITY THAT IS NOT A MEMBER OF DIGGERS HOTLINE SHALL BE CONTACTED SEPARATELY.
- 2. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- 3. RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.
- 4. PROTECT INLETS WITH PROPER INLET PROTECTION AT LOCATIONS EXHIBITING RISK OF BEING IMPACTED BY CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- 5. STAGE CONSTRUCTION TO PROVIDE ACCESS AT ALL TIMES THROUGH EITHER THE BOLVIN STREET OR FISHER STREET INTERSECTIONS.
- 6. THE EXACT LOCATION AND WIDTH OF TEMPORARY ACCESS FOR DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER. STAGE CONSTRUCTION AND PROVIDE TRAFFIC CONTROL TO MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES. THIS INCLUDES THE DRIVEWAY TO THE PARKING LOT FOR VILLA LOUIS AND THE DRIVEWAY TO THE PARKING LOT NORTH OF BOLVIN STREET.
- 7. RESHAPE AND SEED ANY PREVIOUSLY GRASSED AREA(S) WHICH ARE DISTURBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTORS EXPENSE.
- 8. PLACE SALVAGED TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH AND FERTILIZE AND FERTILIZE ALL AREAS 5 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL.

- 9. THE PROJECT IS LOCATED WITHIN THE FLOODWAY OF THE MISSISSIPPI RIVER. TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.
- 10. EDGE OF ASPHALT END CENTERLINE GRADES AND LAYOUT DATA ARE GIVEN AS NOTED ON THE PLANS.
- 11. SAWCUT ASPHALT AT THE MATCHLINE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER
- 12. THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
- 13. EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.
- 14. ALL MANHOLE INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.
- 15. PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR WILL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.
- 16. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

- 17. BENCHMARK LOCATIONS SHOWN ON PLAN ARE APPROXIMATE AND SHOULD BE VERIFIED.
- 18. FOR ALL CURB RAMPS, REFER TO THE STANDARD DETAIL DRAWINGS FOR THE RAMP TAPER DIMENSIONS. SIDEWALK WIDTHS ARE DIMENSIONED IN THE PLAN.
- 19. SIDE ROAD PAVEMENT STRUCTURE SHALL BE THE SAME AS THE MAINLINE.
- 20. HMA PAVEMENT WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS.

TOTAL DEPTH	LAYERS	TYPE	NOMINAL MAX SIZE GRADATION	ASPHALTIC BINDER GRADE
2-INCH	UPPER	4 MT 58-28 S	12.5 mm	58-28
2-INCH	LOWER	4 MT 58-28 S	19.0 mm	58-28

- 21. ASPHALT DRIVEWAY 2 1/2-INCHES HMA SHALL CONSIST OF THE FOLLOWING:  
12" BASE AGGREGATE DENSE 1 1/4-INCH AS THE BASE LAYER  
2 1/2-INCH ASPHALTIC SURFACE DRIVEWAYS
- 22. THE ASPHALT TRAIL SHALL CONSIST OF THE FOLLOWING:  
12" BASE AGGREGATE DENSE - 1 1/4" AS THE BASE LAYER 2 1/2-INCH ASPHALT SURFACE
- 23. THE CONTRACTOR SHALL REMOVE ANY SEDIMENT TRACKED ONTO ADJACENT ROADS BY THE MEANS OF STREET SWEEPING AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE ENGINEER.
- 24. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW BY THE ENGINEER, PRIOR TO PLACING ORDER OF ANY SUCH ITEM.
- 25. CONTRACTOR SHALL INSTALL A TRACKING PAD AT THE ENTRANCE OF THE PROJECT. THE ANTI TRACKING PAD SHALL BE REPLACED AS NECESSARY TO ACCOMMODATE CONSTRUCTION.
- 26. THE PROJECT SITE OVERLAPS TWO UNCATALOGUED BURIAL SITES. PER STATE LAW 157.70, AN ARCHAEOLOGIST MUST BE PRESENT FOR GROUND DISTURBING ACTIVITIES TO TAKE PLACE WITHIN THESE AREAS. CONTRACTOR TO COOPERATE WITH ARCHAEOLOGIST AS REQUIRED FOR ARCHAEOLOGIST TO MONITOR DURING DISTURBANCE, WHICH INCLUDES STRIPPING THE SOIL IN LIFTS AS DIRECTED. CONTRACTOR TO NOTIFY ARCHAEOLOGIST A MINIMUM OF 1 WEEK IN ADVANCE OF COMPLETING THE WORK. TIME RESTRICTIONS FOR WORKING IN THE UNCATALOGUED BURIAL SITE: 8 AM TO 5 PM MONDAY THROUGH FRIDAY OR AS APPROVED BY ARCHAEOLOGIST.
- 27. THE FOLLOWING EVENTS WILL BE HELD ON ST. FERIOLE ISLAND ADJACENT TO THE PROJECT.
  - 2022 PRAIRIE VILLA RENDEZVOUS: JUNE 11 - 18
  - PRAIRIE DOG BLUES FEST: JULY 24 - JULY 31
  - CARRIAGE CLASSIC: SEPTEMBER 5 - SEPTEMBER 10
 THE WORK SOUTH OF BOLVIN STREET CAN'T BE COMPLETED DURING THESE EVENTS. THE WORK NORTH OF BOLVIN STREET CAN BE COMPLETED AT ANY TIME PRIOR TO SUBSTANTIAL COMPLETION.



UTILITIES:

ELECTRIC  
ALLIANT CONTACT:  
AL MUMM  
ALLIANT ENERGY  
2200 E CAMPION BLVD  
PRAIRIE DU CHIEN, WI 53821  
ALLANMUMM@ALLIANTENERGY.COM  
608-732-7925

GAS  
MG&E  
MARK OEHLER  
PHONE: 608-326-2417  
MOEHLER@MGE.COM

COMMUNICATION  
LUMEN CONTACT:  
DOUG MCGOWAN  
PHONE: 608-482-5377  
DOUG.MCGOQAN1@LUMEN.COM

WATER  
LARRY GATES  
CITY OF PRAIRIE DU CHIEN - WATER  
214 BLACKHAWK AVE.  
PRAIRIE DU CHIEN, WI 53821  
PHONE: 608-326-8213  
CELL: 608-306-0360

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES  
PROJECT OVERVIEW  
TYPICAL SECTIONS  
CONSTRUCTION DETAILS  
PAVING PLAN  
CROSS WALK DETAILS  
EROSION CONTROL PLANS  
SIGNING & PAVEMENT MARKING PLANS  
PLAN & PROFILE - STORM SEWER  
ALIGNMENT/CONTROL POINT DATA  
LIGHTING PLAN  
TREE PLANTING PLAN

ALIGNMENT IDENTIFIERS

"VL" VILLA LOUIS RD  
"RL" ROLETTE ST  
"FS" FISHER ST  
"BB" BRISBOIS ST  
"BN" BOLVIN ST  
"WT" WATER ST

ABBREVIATIONS

AEW APRON ENDWALL  
AGG AGGREGATE  
ASPH ASPHALT  
BAD BASE AGGREGATE DENSE  
BM BENCH MARK  
C&G CURB AND GUTIER  
C/L CENTER OR CONSTRUCTION LINE  
CMP CULVERT PIPE CORRUGATED METAL  
CONC CONCRETE  
CP CULVERT PIPE  
RCP CULVERT PIPE REINFORCED CONCRETE  
CSD CONCRETE SURFACE DRAIN  
CY CUBIC YARD  
D DEGREE OF CURVE  
Δ DELTA  
DISCH DISCHARGE  
EAT ENERGY ABSORBING TERMINAL  
FE FIELD ENTRANCE  
HMA HOT MIX ASPHALT  
INV INVERT  
L LENGTH OF CURVE  
LHF LEFT HAND FORWARD  
LT LEFT  
MIN MINIMUM  
MATCH MATCHLINE  
NB NORTHBOUND  
NC NORMAL CROWN  
PAVT PAVEMENT  
PC POINT OF CURVE  
PCC POINT OF COMPOUND CURVE  
PE PRIVATE ENTRANCE  
PI POINT OF INTERSECTION  
PLE PERMANENT LIMITED EASEMENT  
PT POINT OF TANGENT  
R RADIUS OF CURVE  
R/L REFERENCE LINE  
R/W RIGHT OF WAY  
RC REVERSE CROWN  
RCPAE APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE  
REQD REQUIRED  
RHF RIGHT HAND FORWARD  
RO RUN OFF LENGTH  
RRSP RAILROAD SPIKE  
RT RIGHT  
SALV SALVAGED  
SAPBC SALVAGED ASPHALTIC PAVEMENT BASE COURSE  
SB SOUTHBOUND  
SDD STANDARD DETAIL DRAWINGS  
SE SUPER ELEVATION  
SF SQUARE FOOT  
SSPRC STORM SEWER PIPE REINFORCED CONCRETE  
STA STATION  
SY SQUARE YARD  
T TANGENT LENGTH  
TLE TEMPORARY LIMITED EASEMENT  
VCL VERTICAL CURVE LENGTH  
VPC POINT OF VERTICAL CURVE  
VPI POINT OF VERTICAL INTERSECTION  
VPT POINT OF VERTICAL TANGENT

AGENCIES:

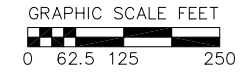
EMERGENCY - FIRE, RESCUE, AMBULANCE,  
POLICE  
DIAL 911

DEPARTMENT OF NATURAL RESOURCES

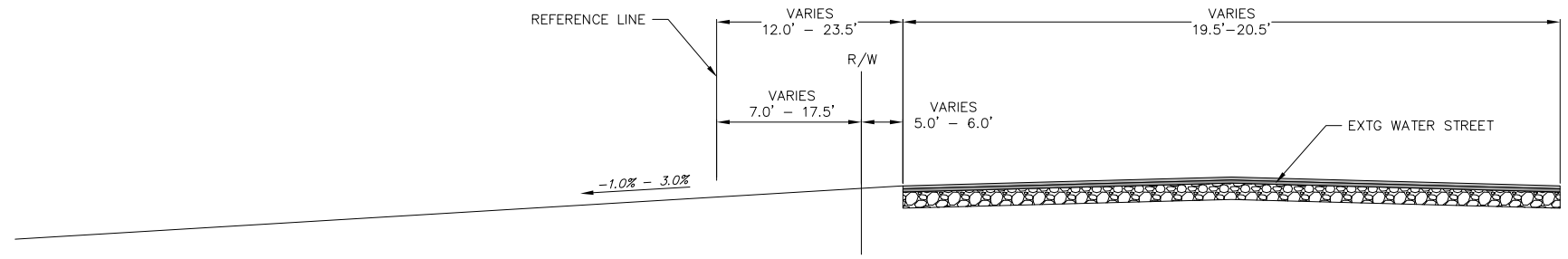
DNR SERVICE CENTER  
KAREN KALVELAGE  
3550 MORMON COULEE ROAD  
LA CROSSE, WI 54601  
PHONE: (608) 785-9115  
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

CONSULTANT PROJECT MANAGER

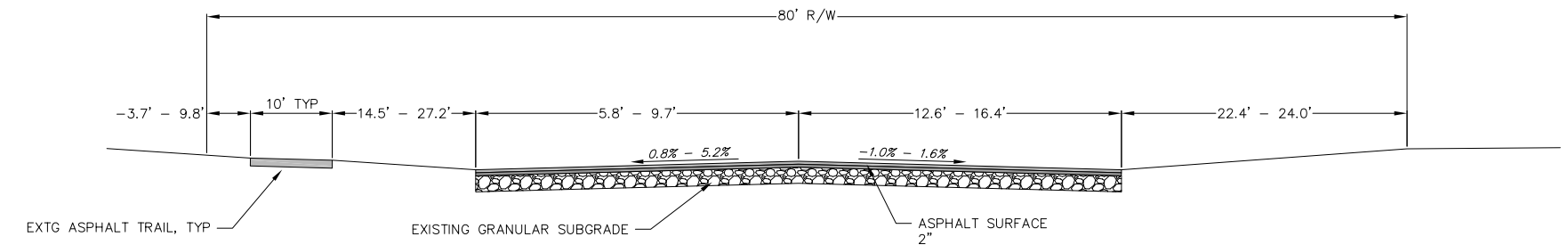
VIERBICHER  
MATT MUCHOW  
400 VIKING DRIVE  
REEDSBURG, WI 53959  
608-402-6379  
mmuc@vierbicher.com



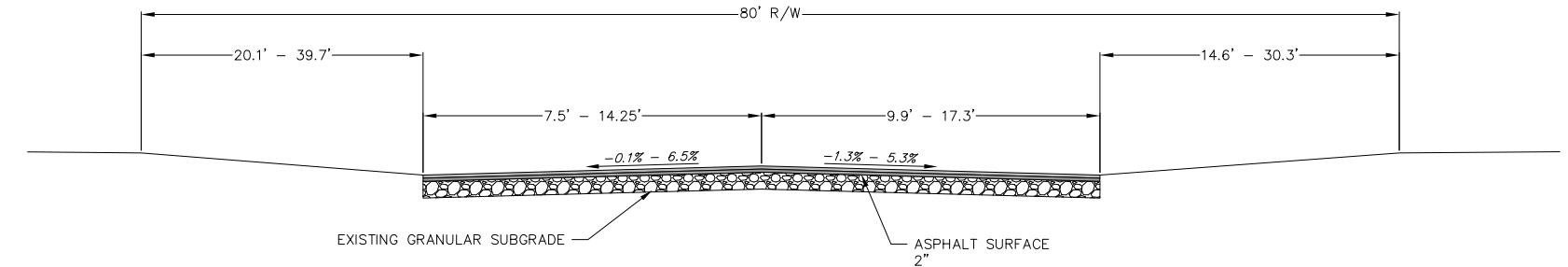
PROJECT NO:5997-00-41	HWY:VILLA LOUIS ROAD	COUNTY:CRAWFORD	PLAN: PROJECT OVERVIEW	SHEET	<b>E</b>
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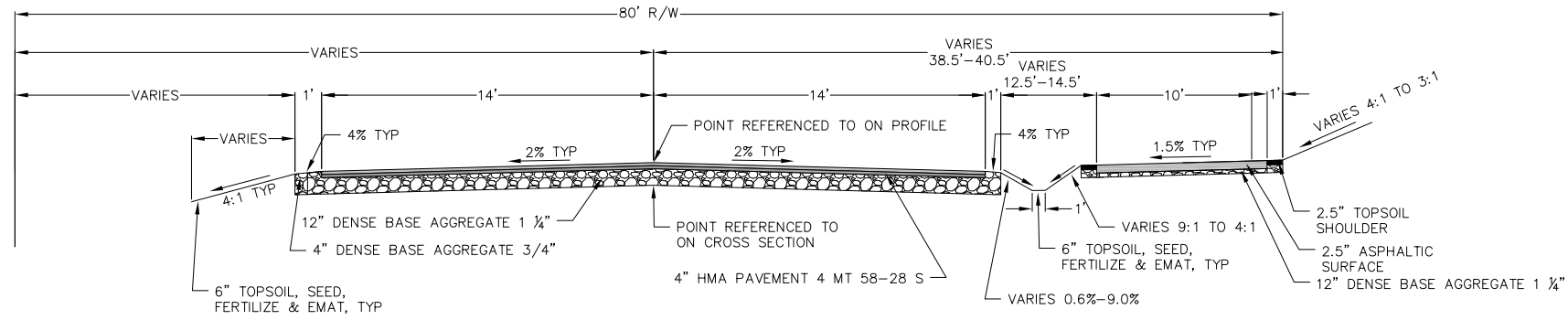
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NOT TO SCALE STA 88+65.5 – STA 90+87.4



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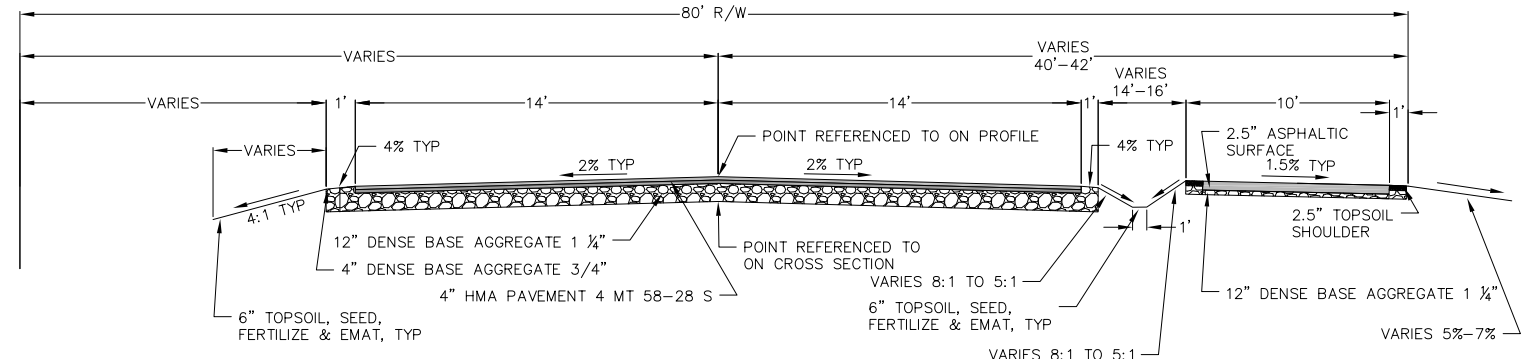


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STA 33+67.6 – STA 40+00



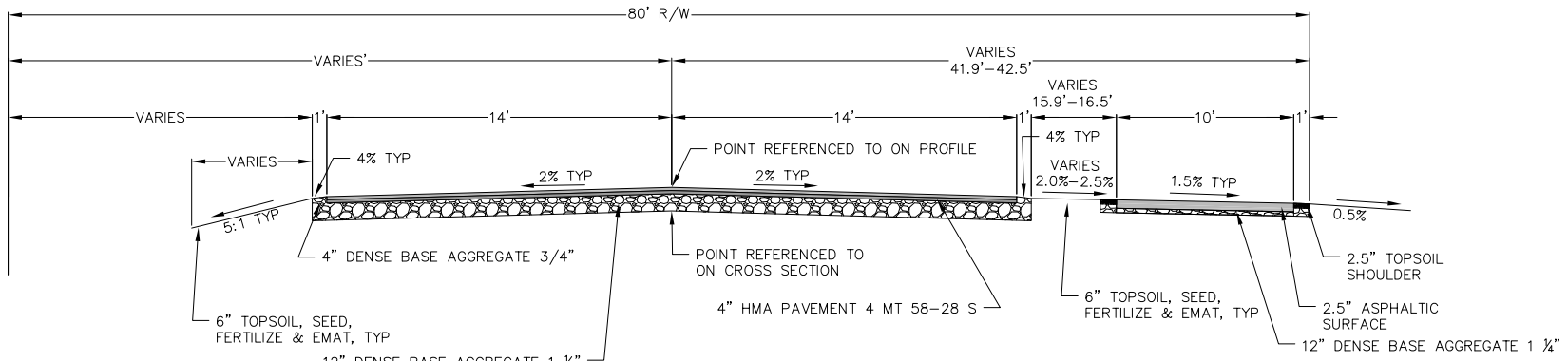
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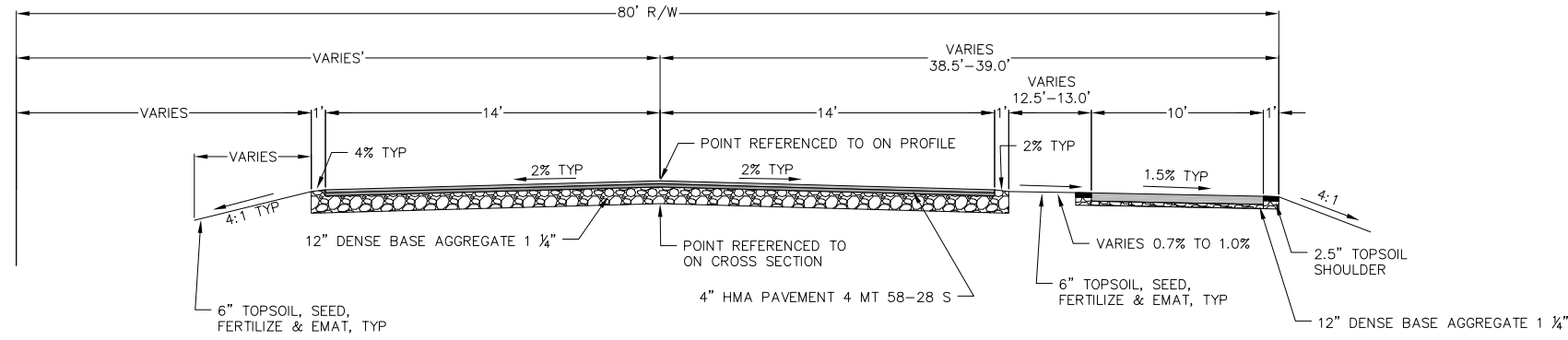
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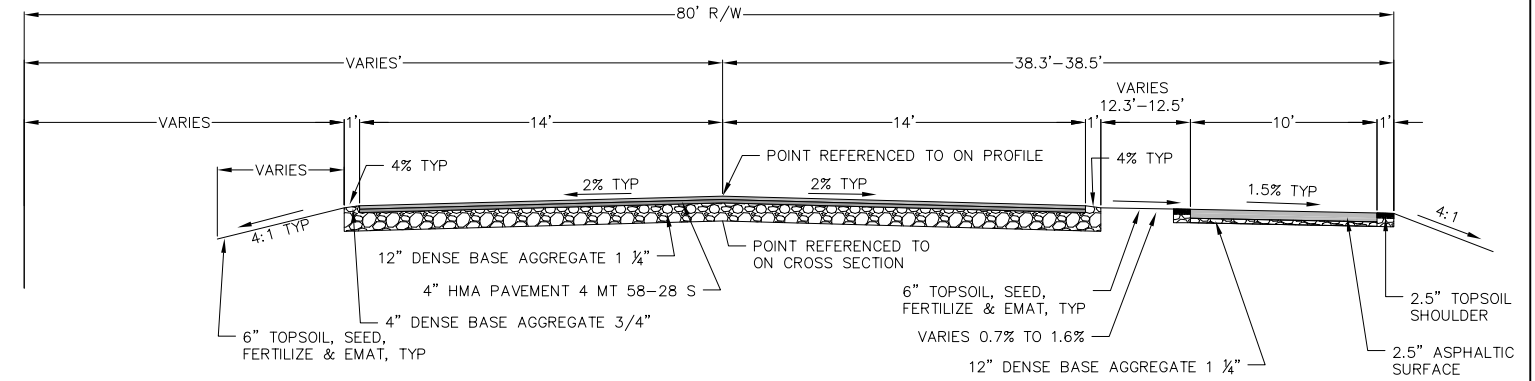


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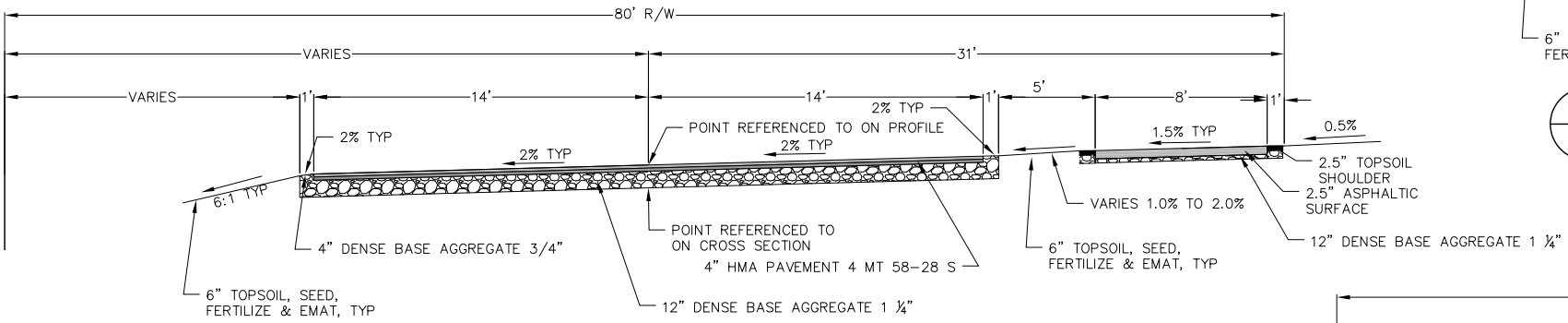
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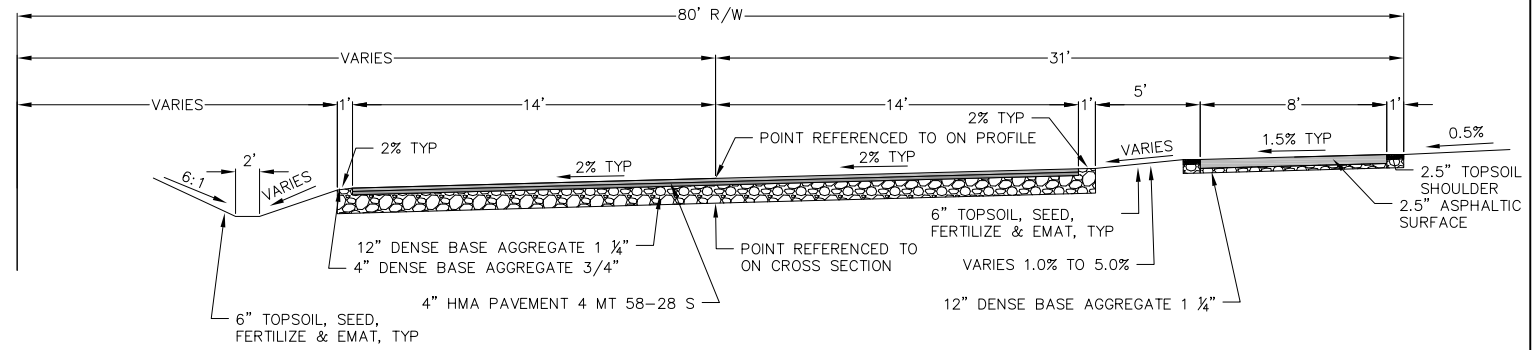
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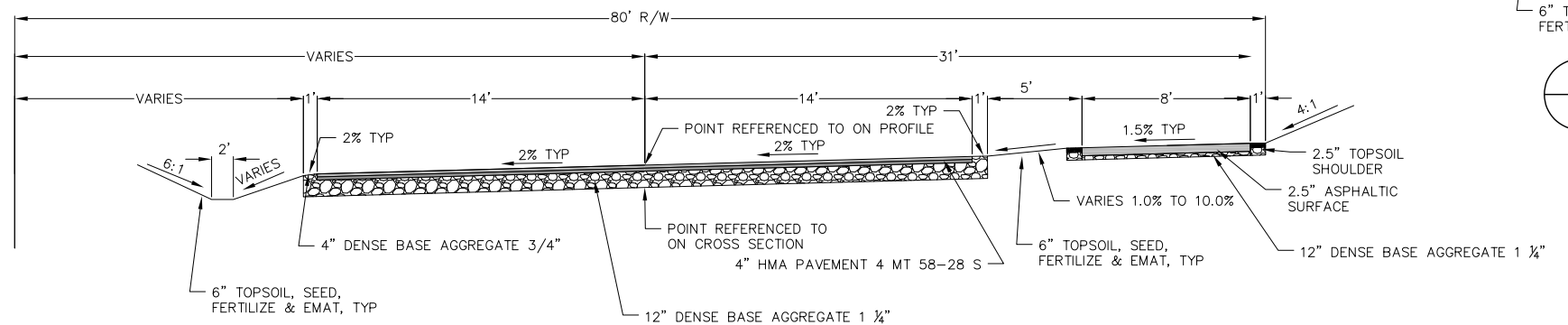
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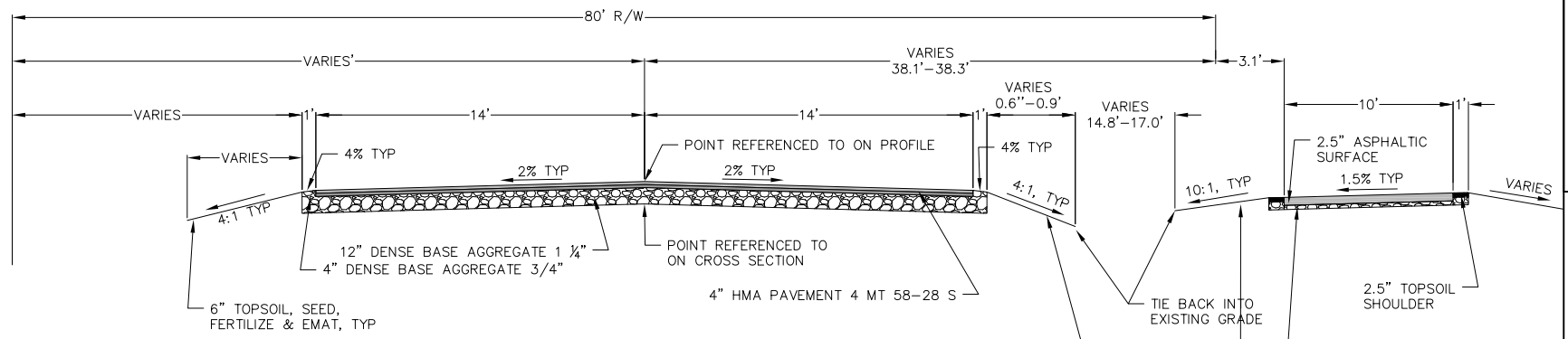
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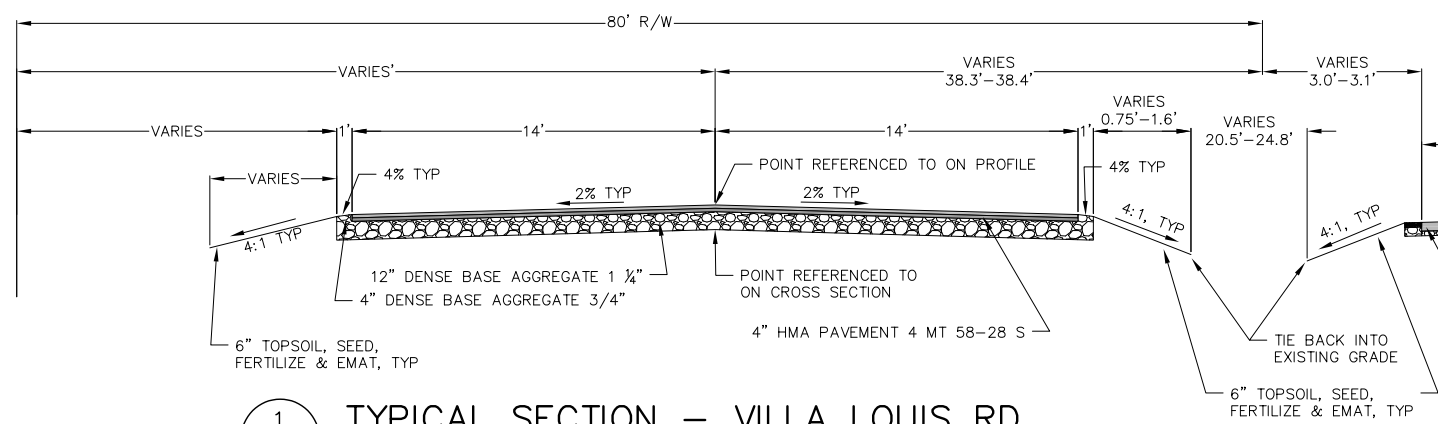
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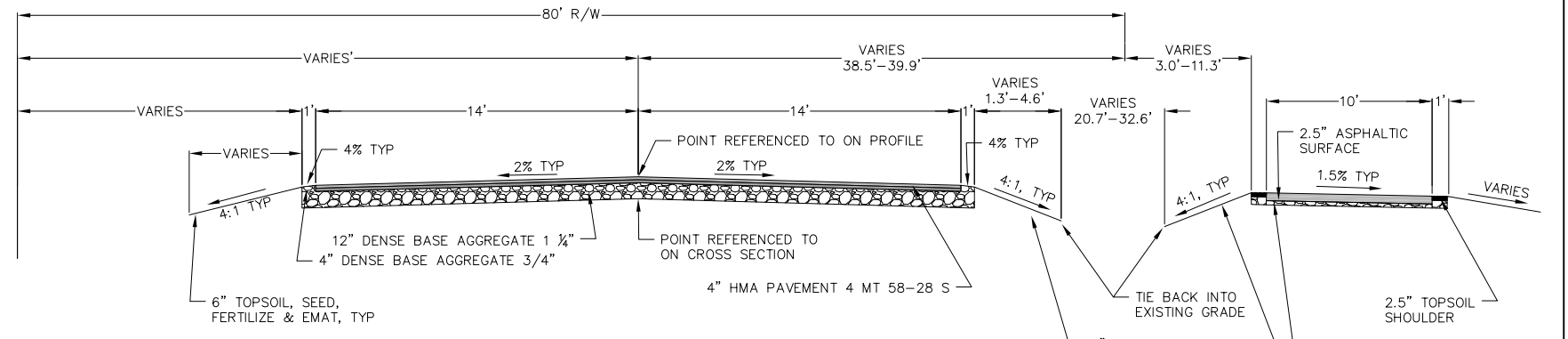
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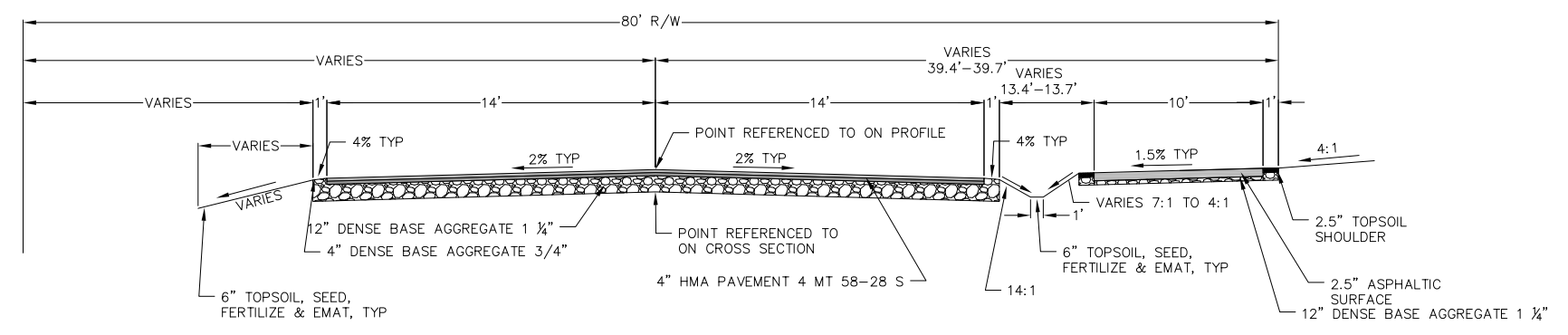
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STA 27+75 – STA 28+40

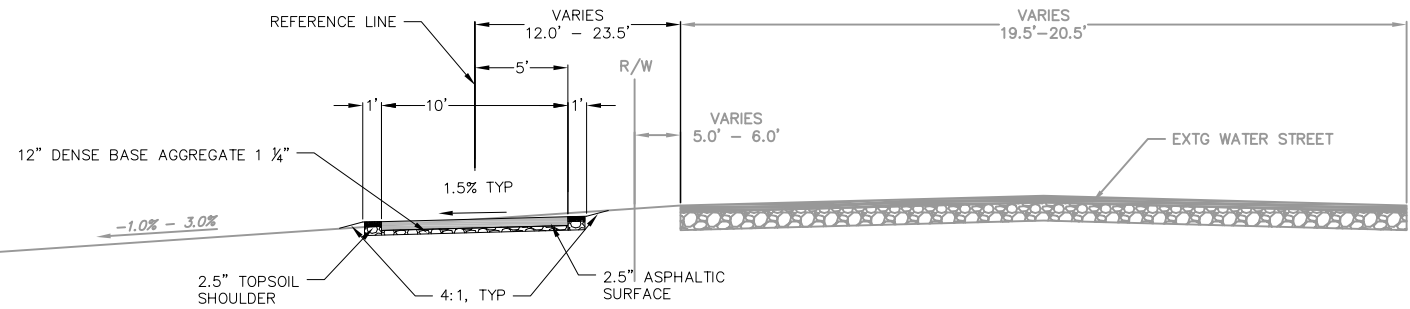


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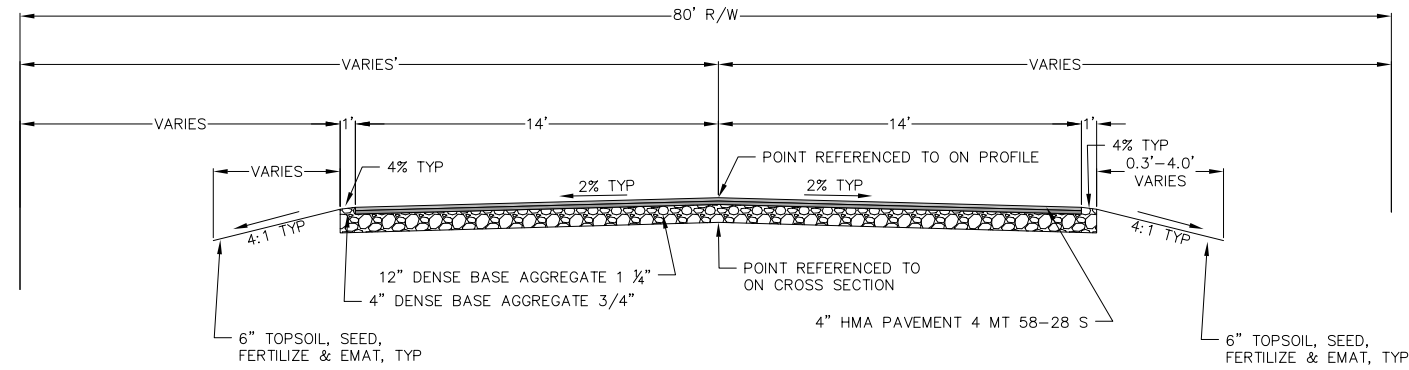


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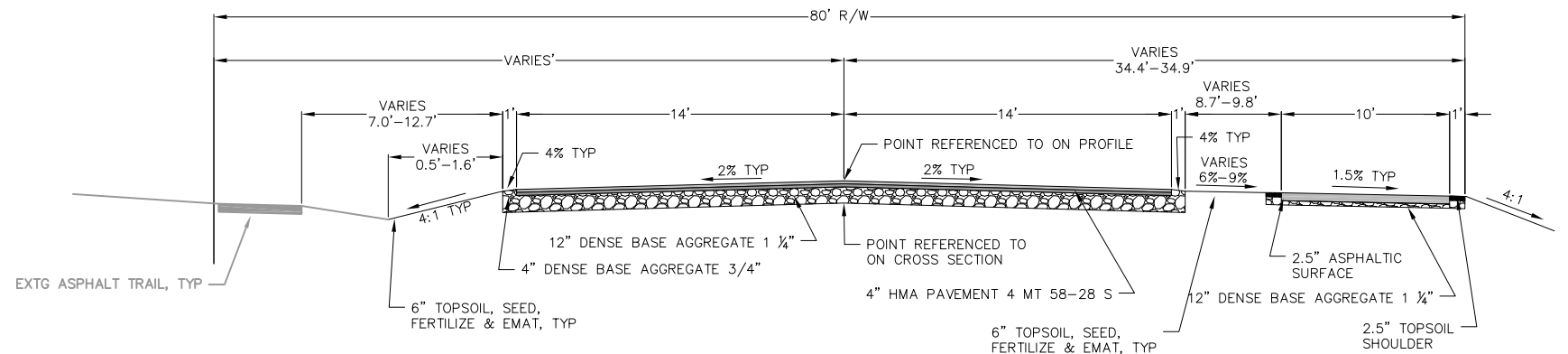




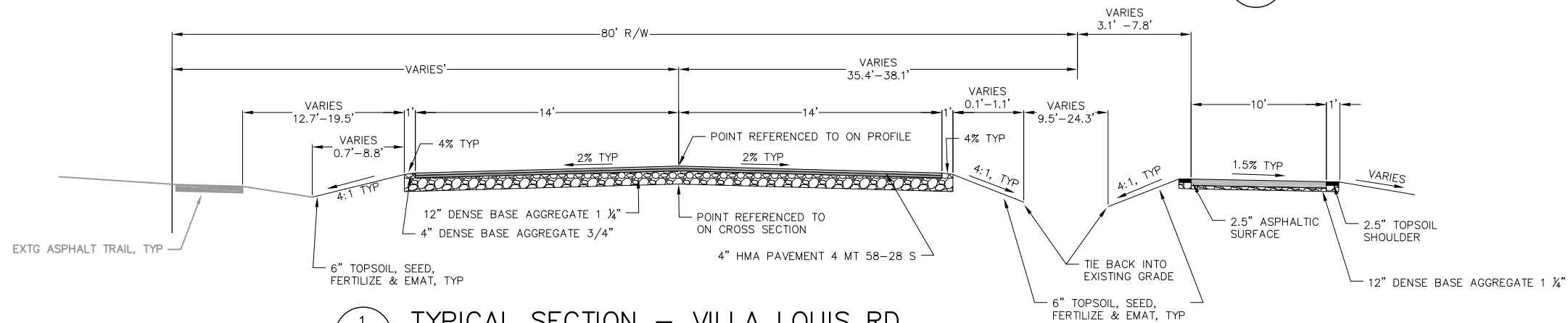
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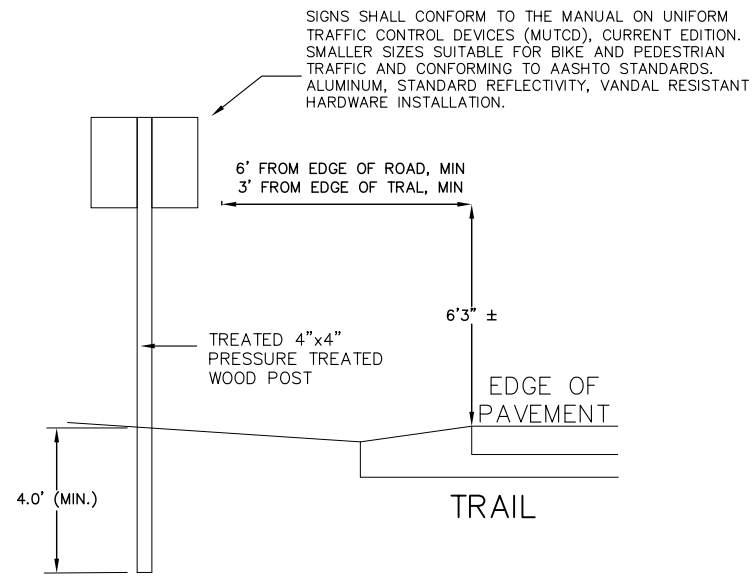
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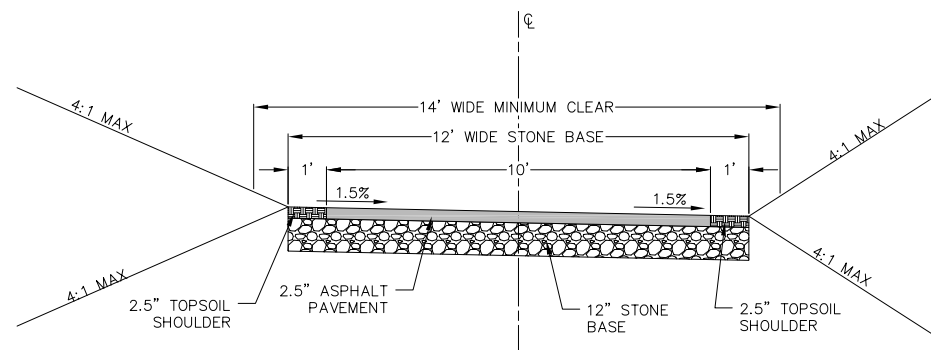


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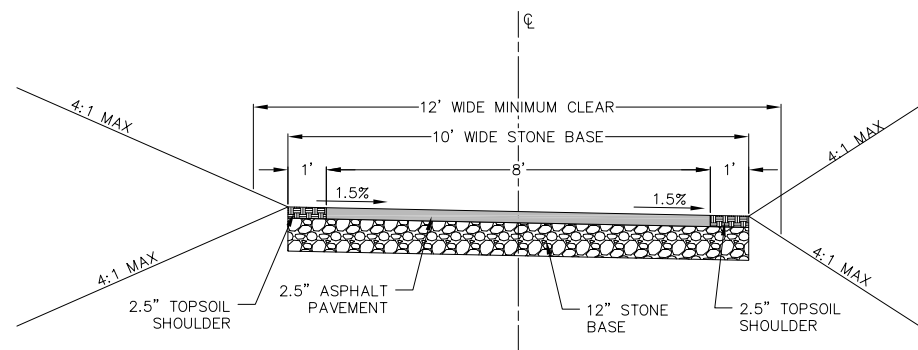
TYPICAL SIGN PLACEMENT

(NOT TO SCALE)



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TRAIL TYPICAL SECTION  
NOT TO SCALE STA 2+44.6 - STA 7+75, STA 12+50 - END

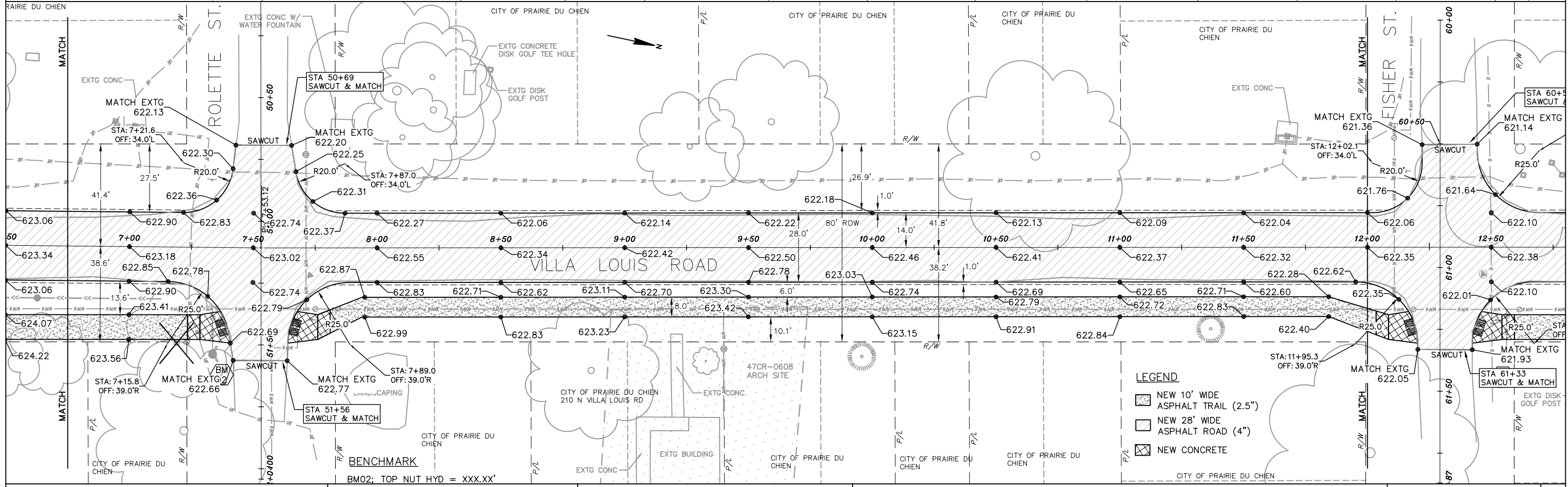
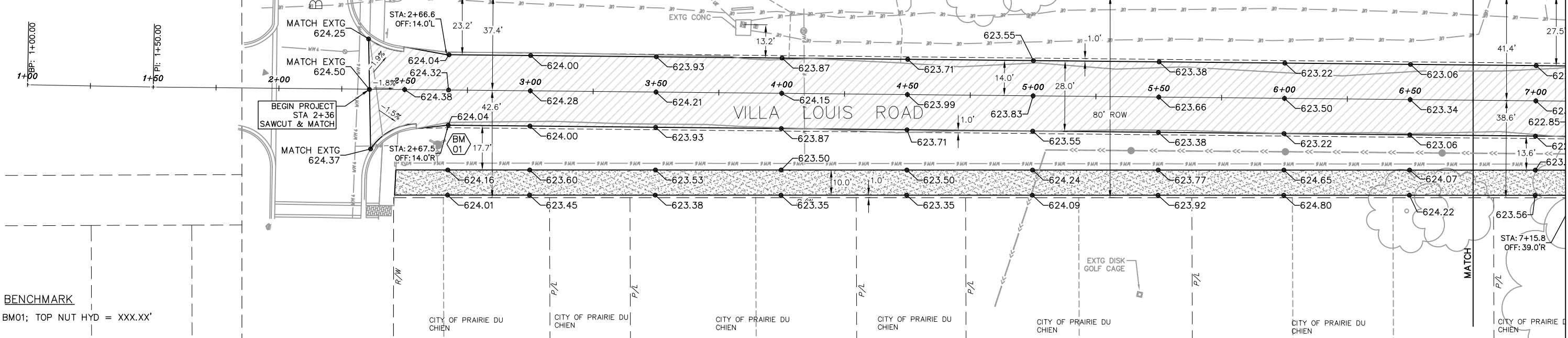


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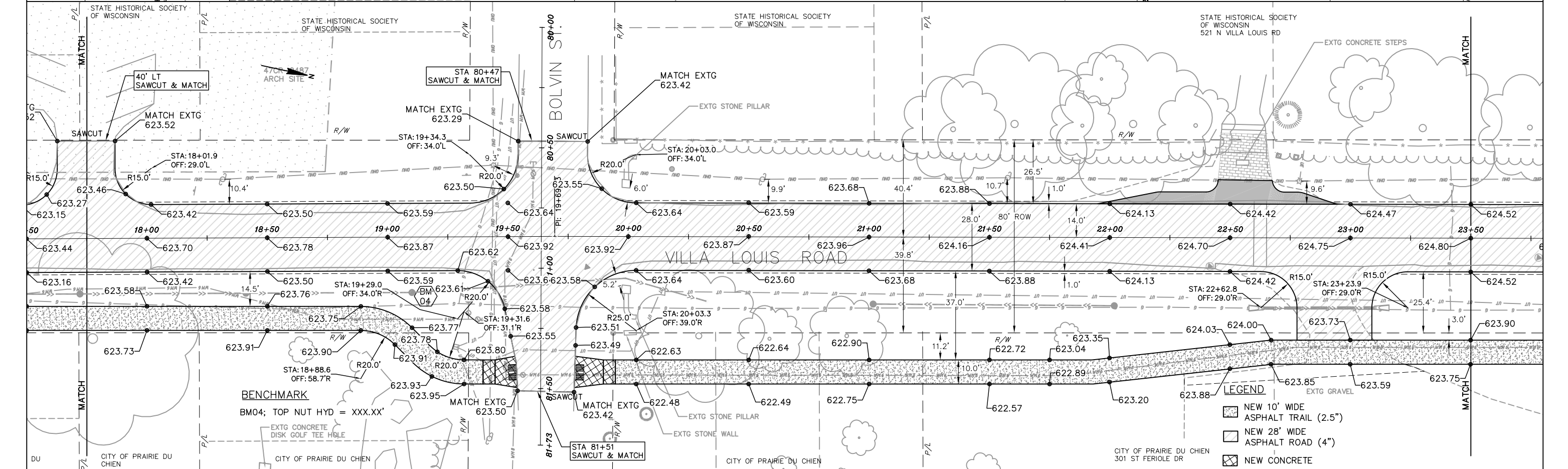
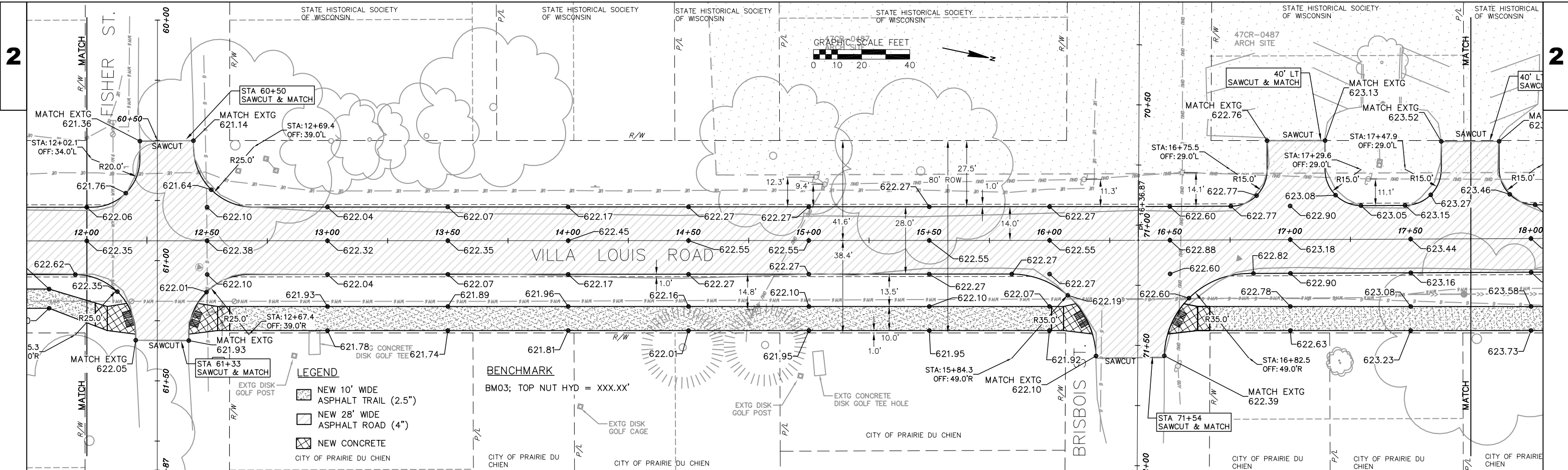
TRAIL TYPICAL SECTION  
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- LEGEND**
- NEW 10' WIDE ASPHALT TRAIL (2.5")
  - NEW 28' WIDE ASPHALT ROAD (4")
  - NEW CONCRETE



PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PAVING PLAN: VILLA LOUIS ROAD      SHEET **E**



PROJECT NO: 5997-00-41

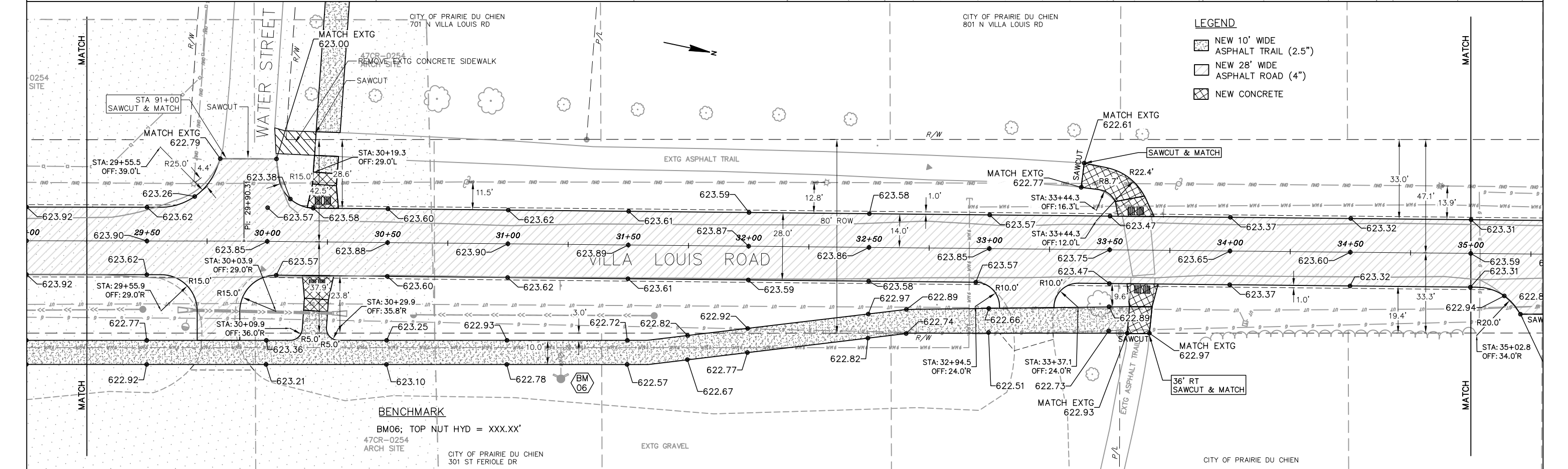
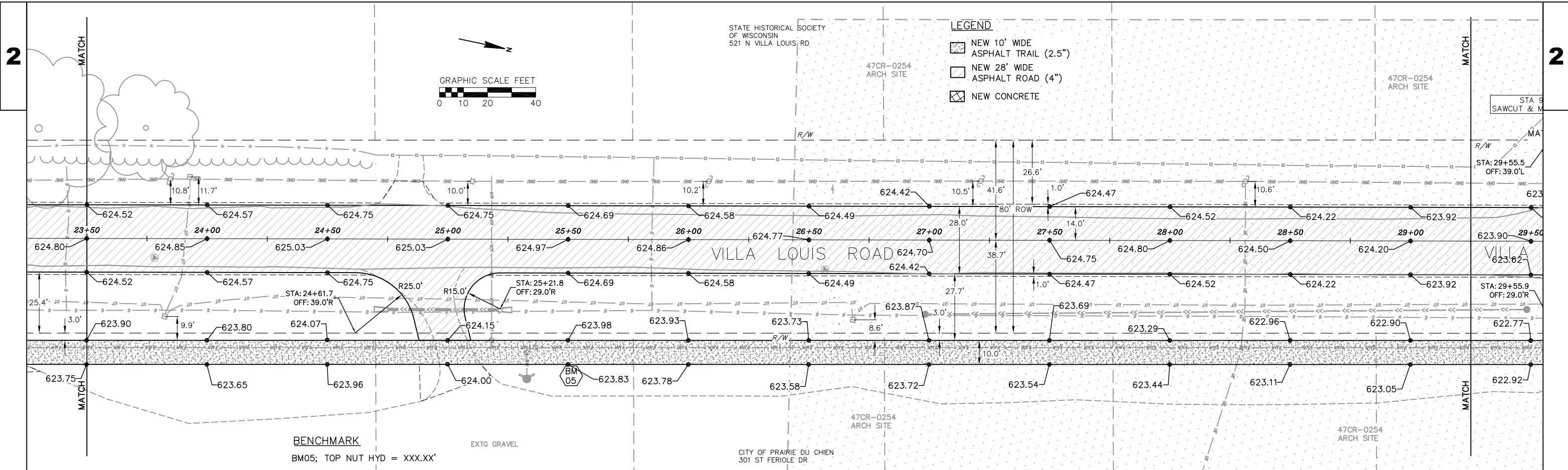
HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

PAVING PLAN: VILLA LOUIS ROAD

SHEET

E



PROJECT NO: 5997-00-41

HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

PAVING PLAN: VILLA LOUIS ROAD

SHEET

E

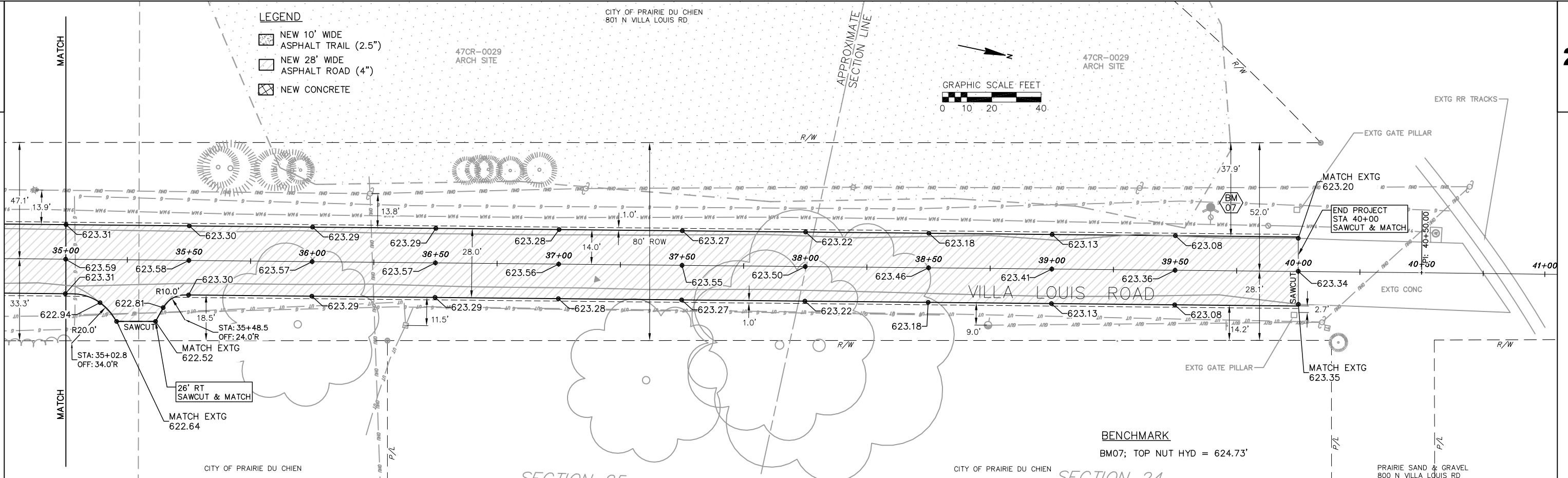
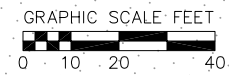
LEGEND

- NEW 10' WIDE ASPHALT TRAIL (2.5")
- NEW 28' WIDE ASPHALT ROAD (4")
- NEW CONCRETE

CITY OF PRAIRIE DU CHIEN  
801 N VILLA LOUIS RD.

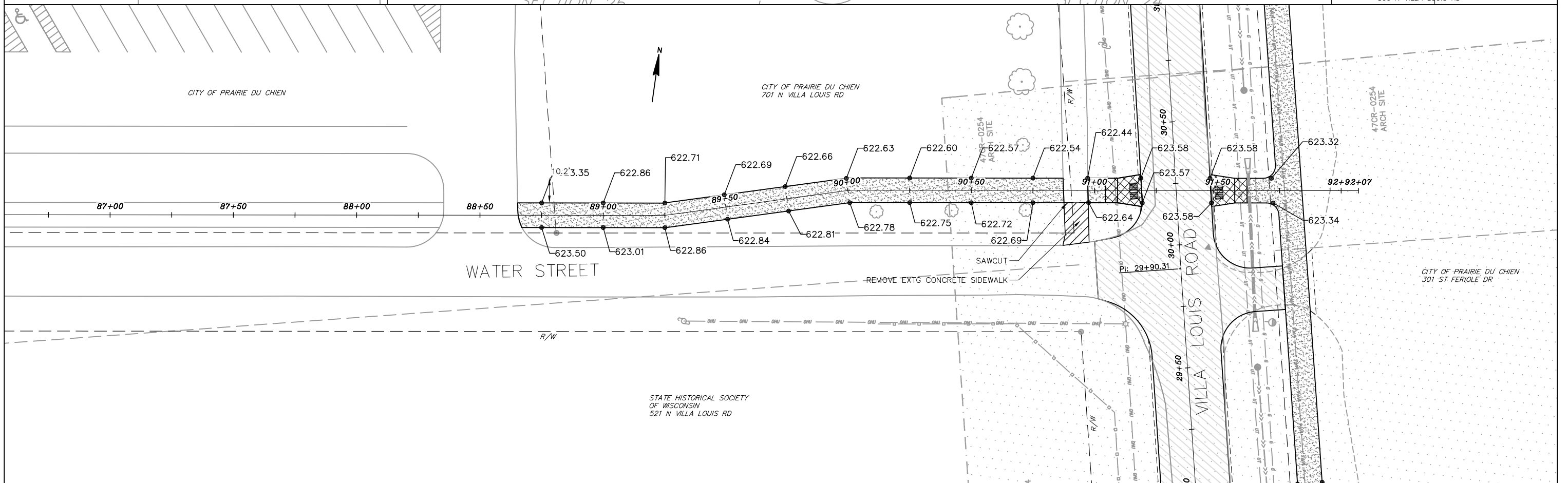
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ARCH SITE

47CR-0029  
ARCH SITE

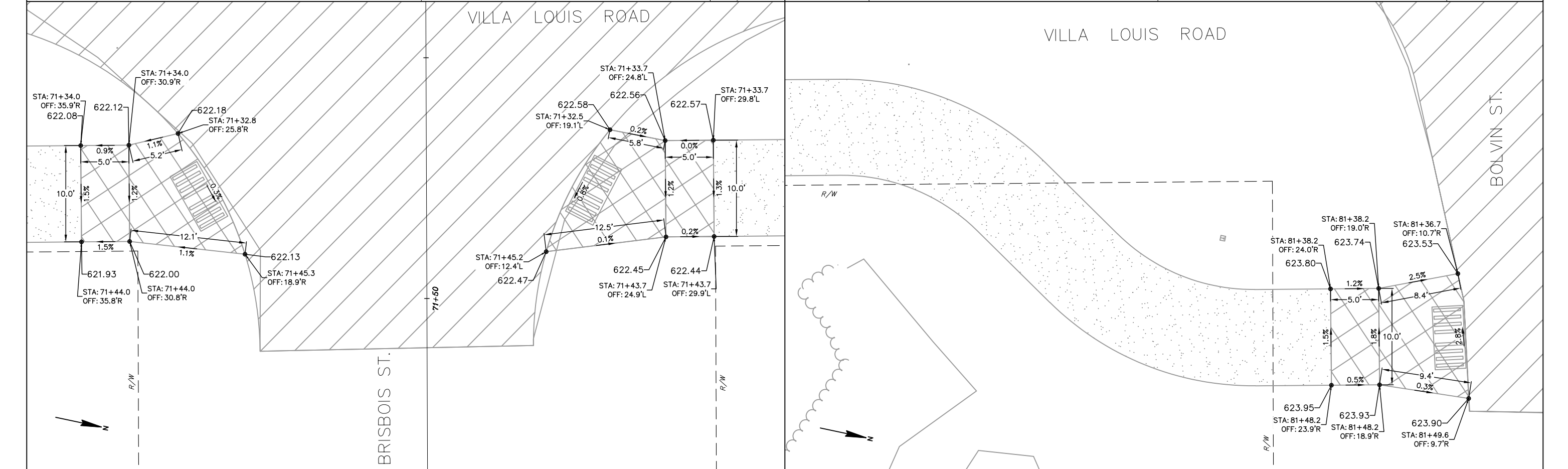
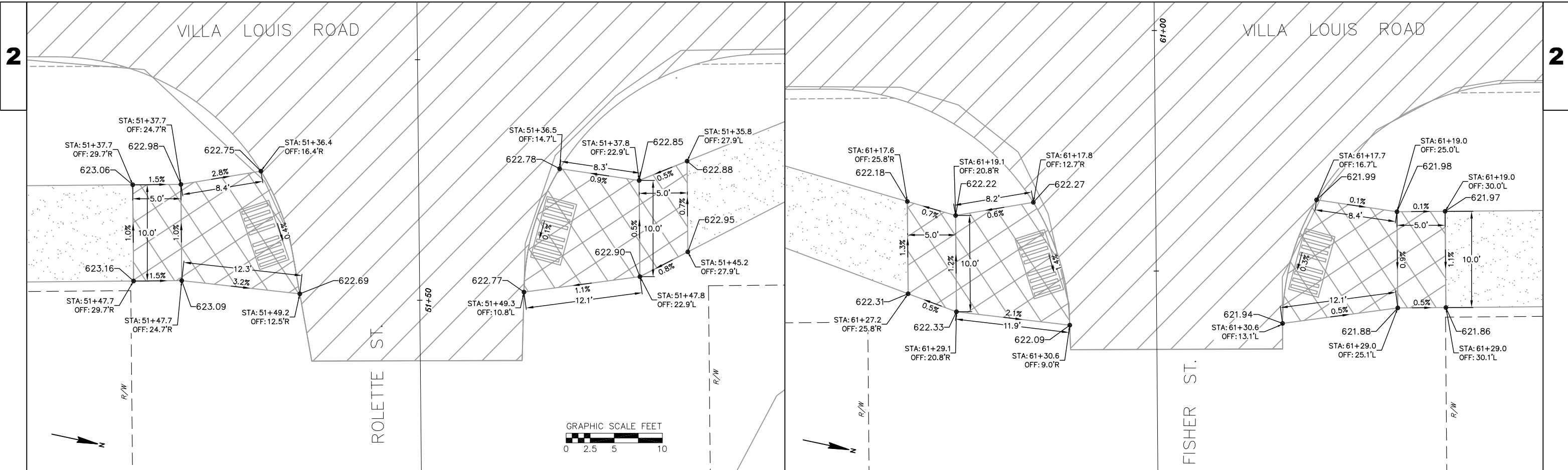


SECTION 25

SECTION 24



PROJECT NO: 5997-00-41	HWY: VILLA LOUIS ROAD	COUNTY: CRAWFORD	PAVING PLAN: VILLA LOUIS ROAD/WATER STREET	SHEET	<b>E</b>
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PROJECT NO: 5997-00-41

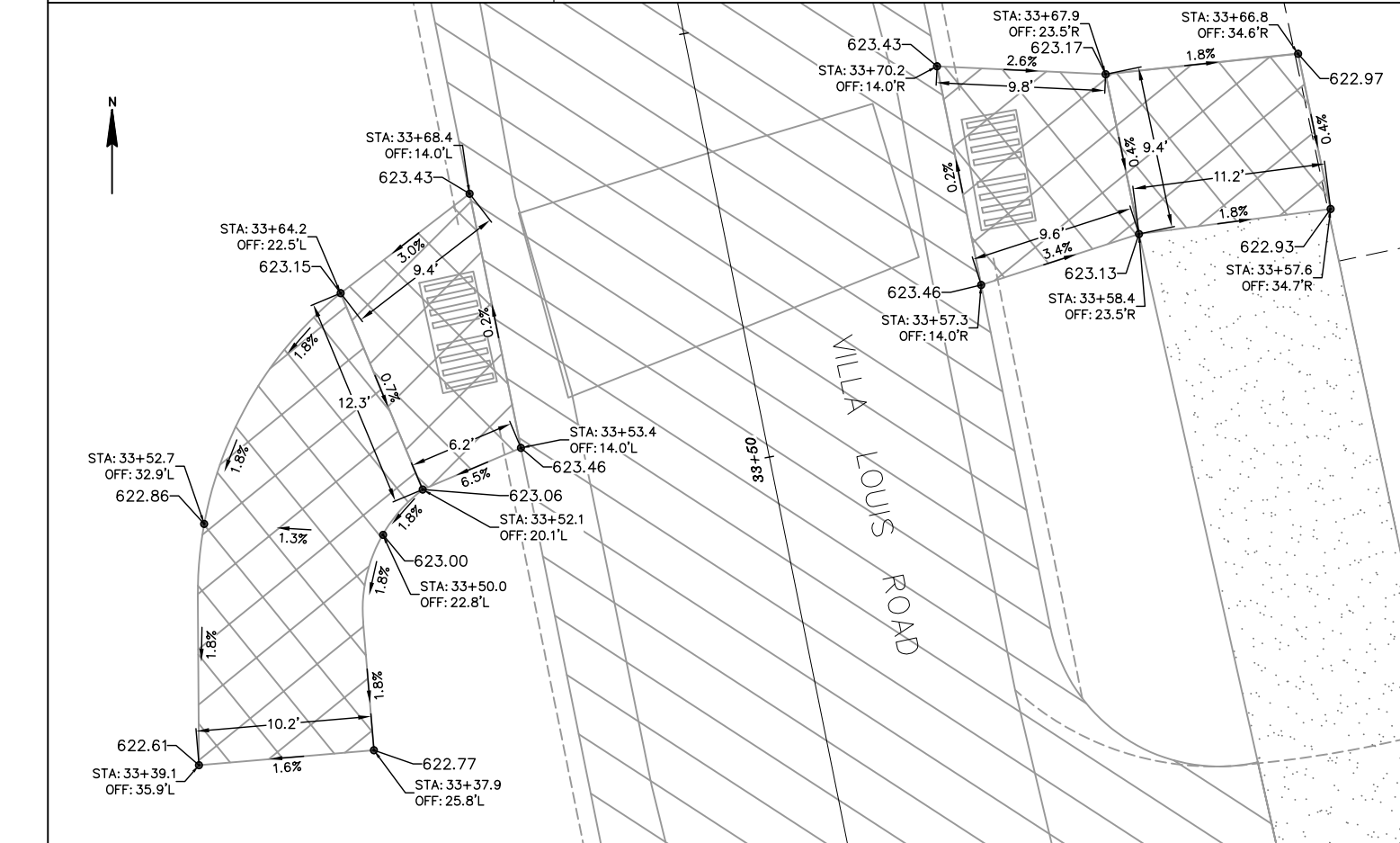
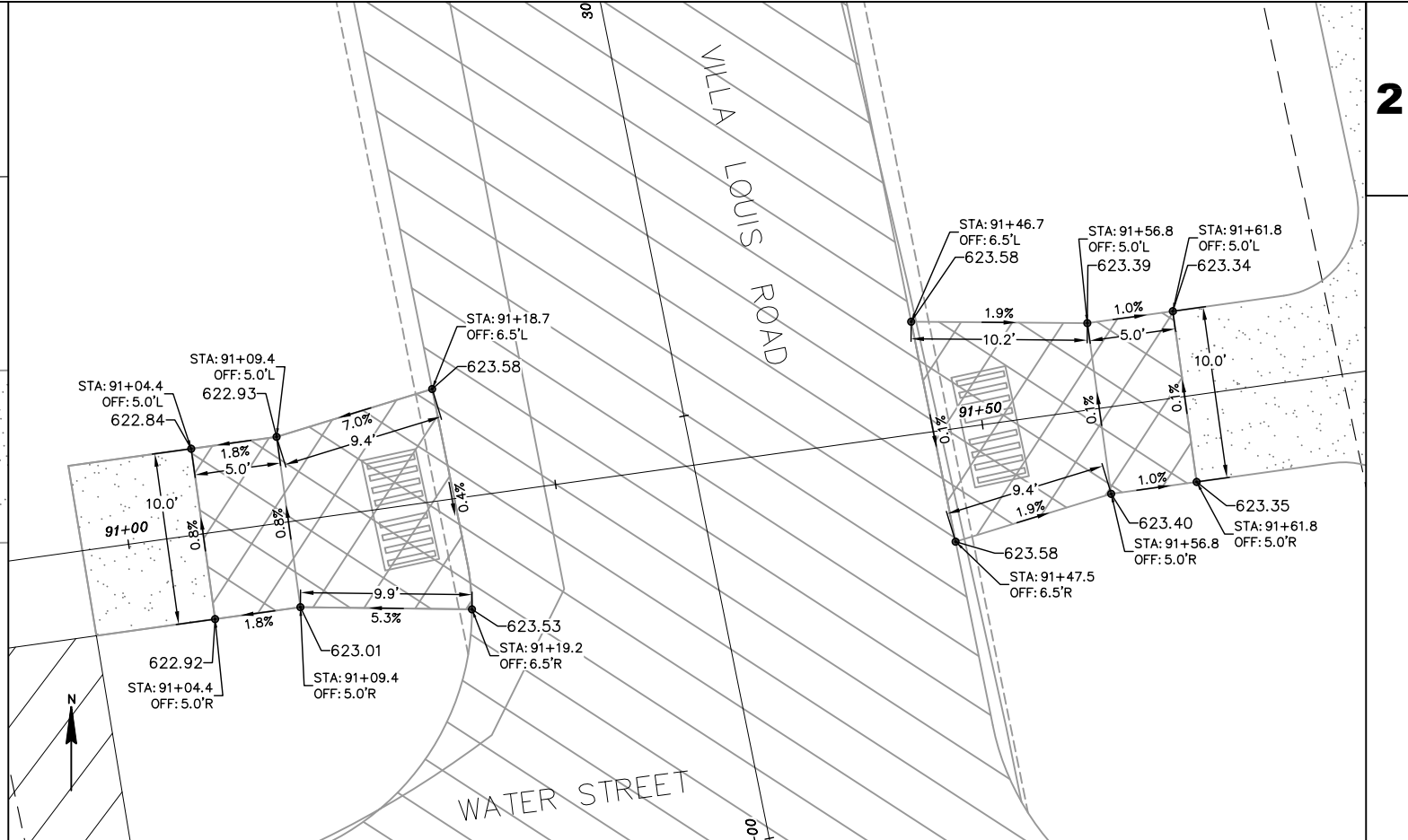
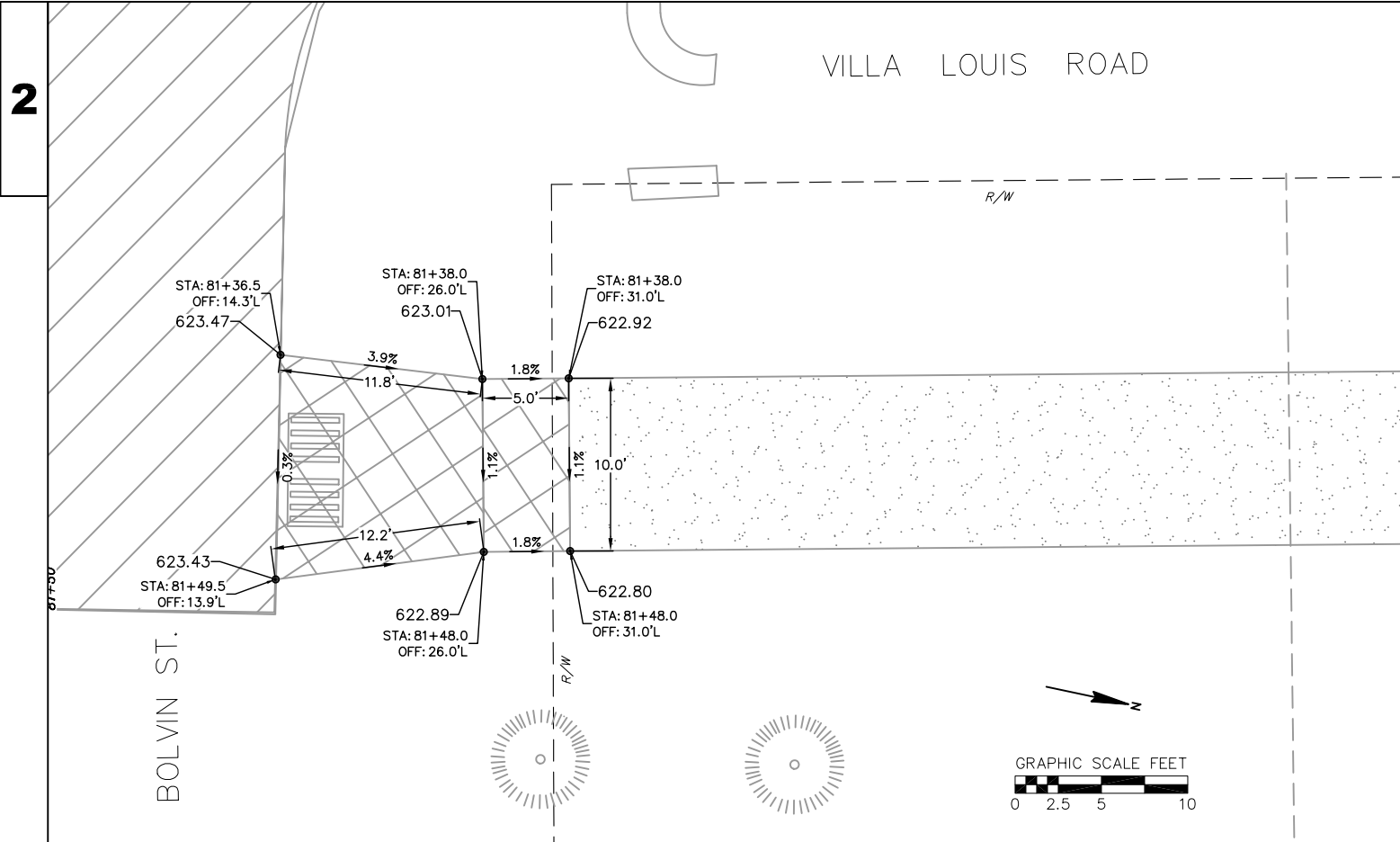
HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

CROSS WALK DETAILS: VILLA LOUIS ROAD

SHEET

E



PROJECT NO: 5997-00-41

HWY: VILLA LOUIS ROAD

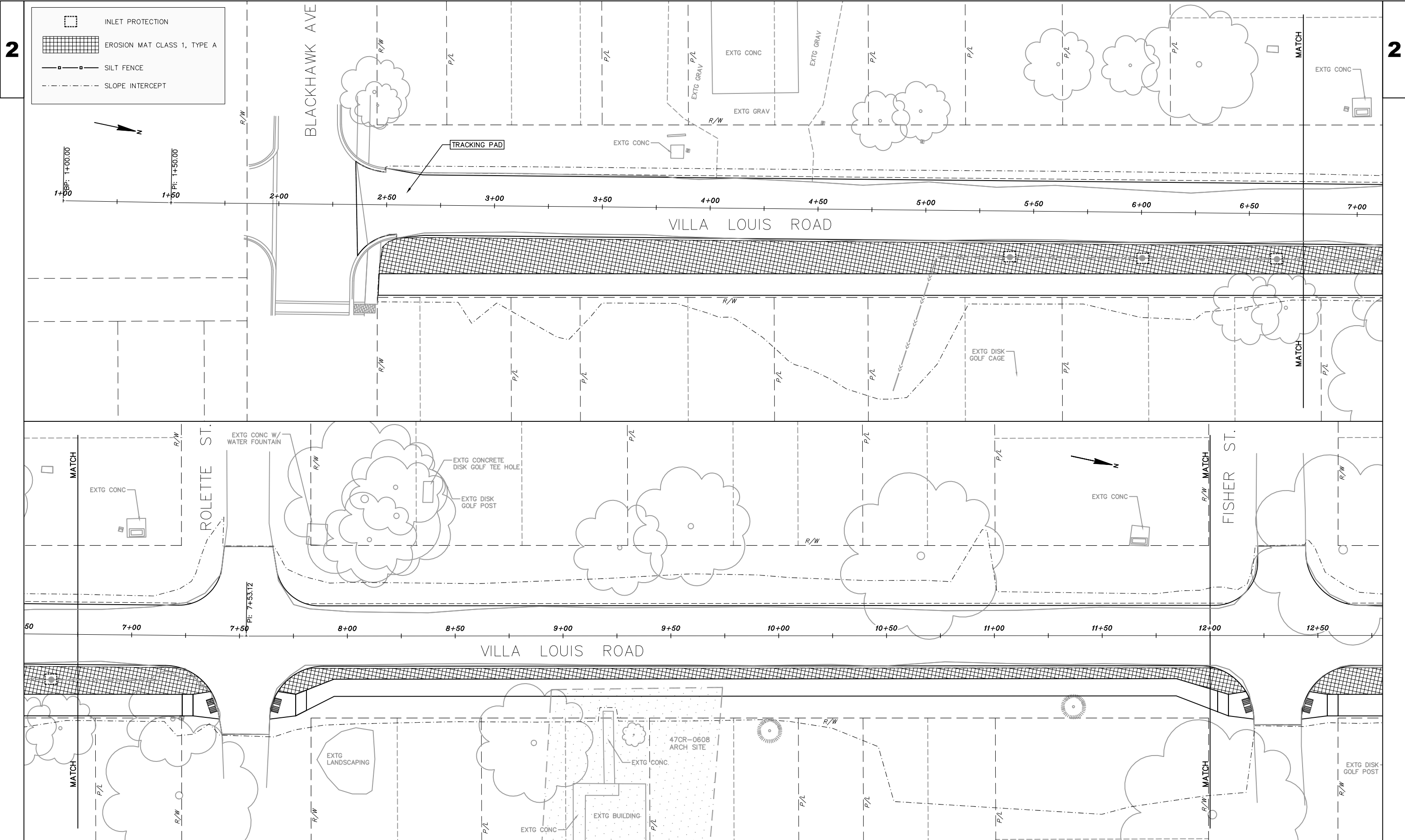
COUNTY: CRAWFORD

CROSS WALK DETAILS: VILLA LOUIS ROAD

SHEET

E





PROJECT NO: 5997-00-41

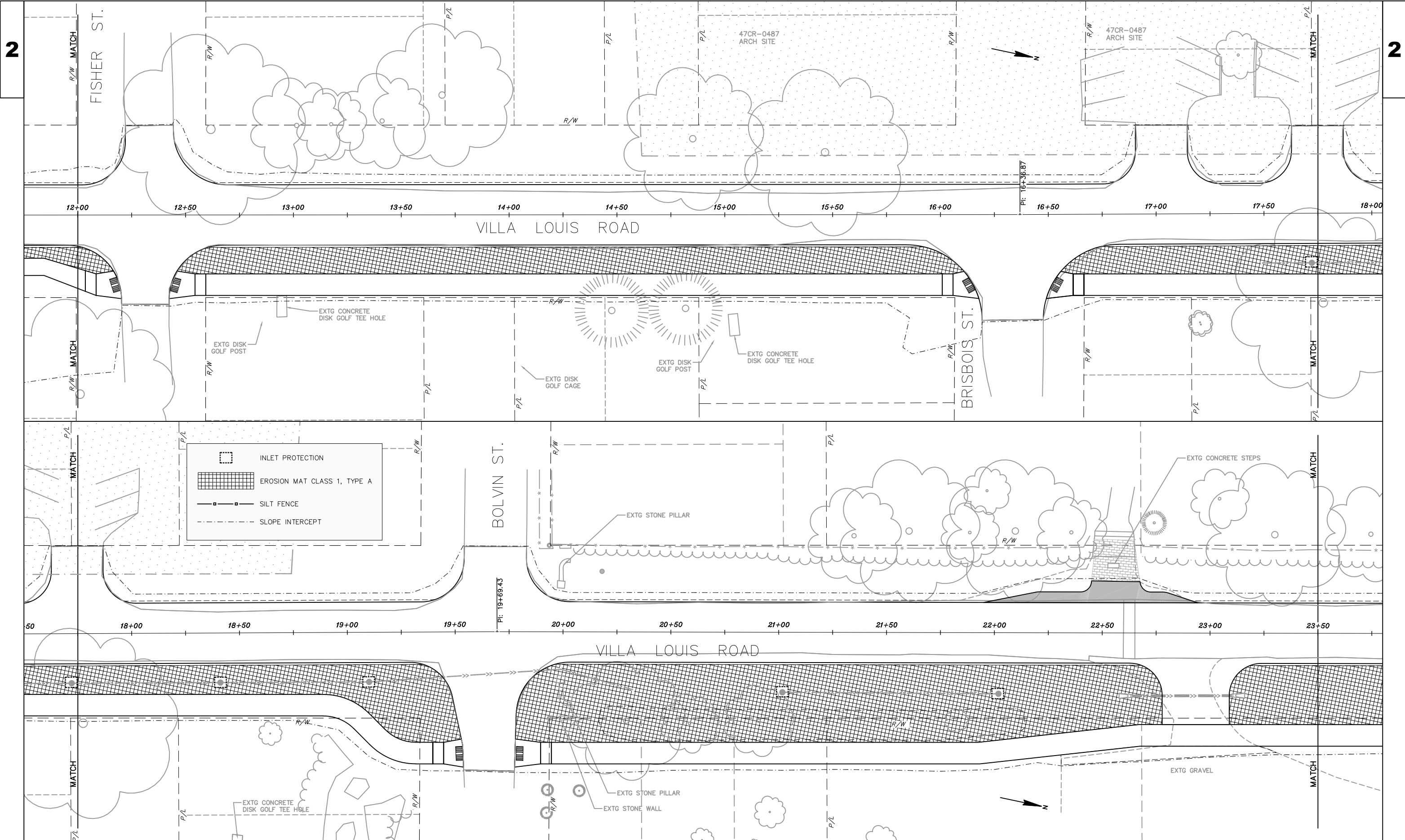
HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

EROSION CONTROL PLAN

SHEET

E



PROJECT NO: 5997-00-41

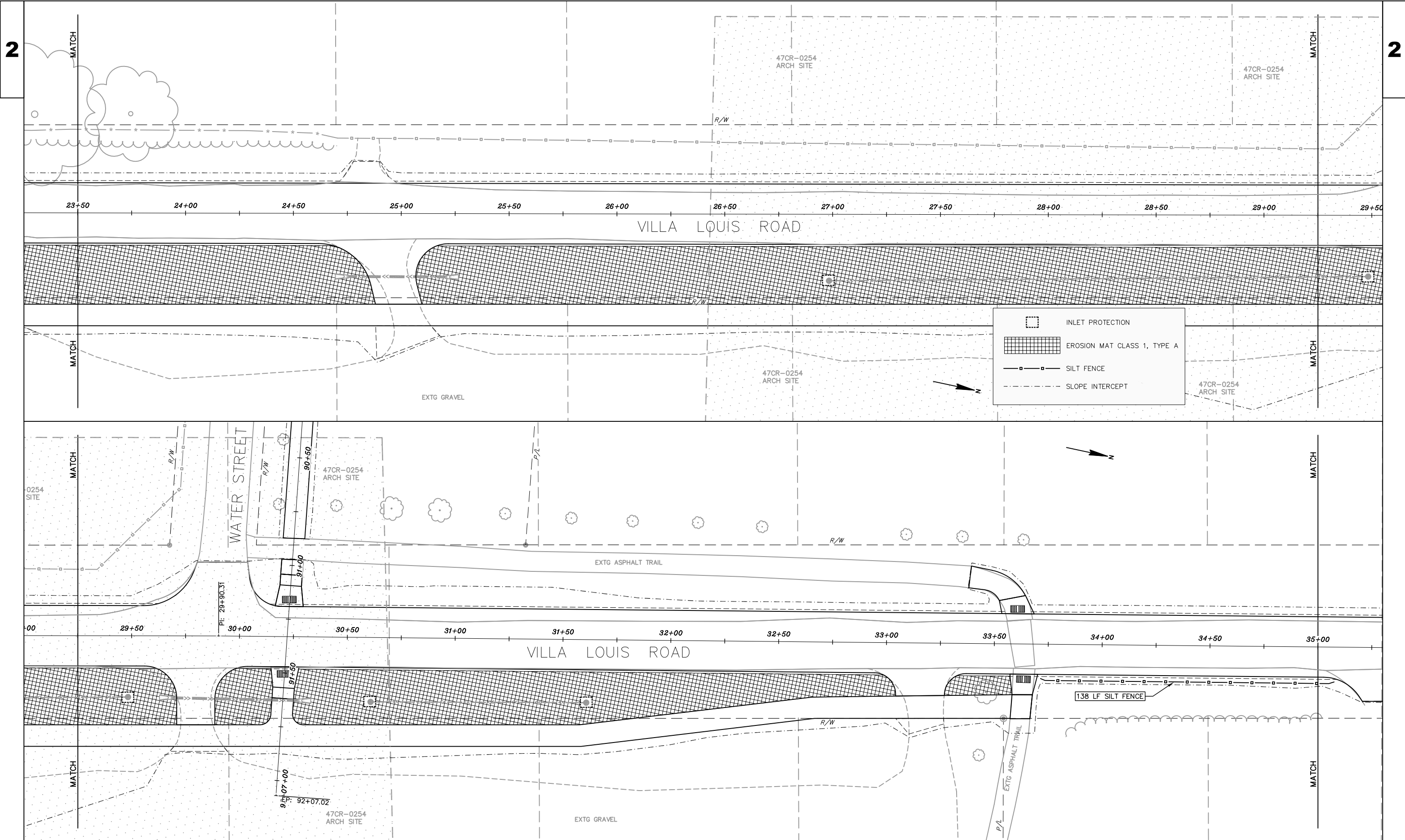
HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

EROSION CONTROL PLAN


SHEET


E





PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      EROSION CONTROL PLAN      SHEET      **E**

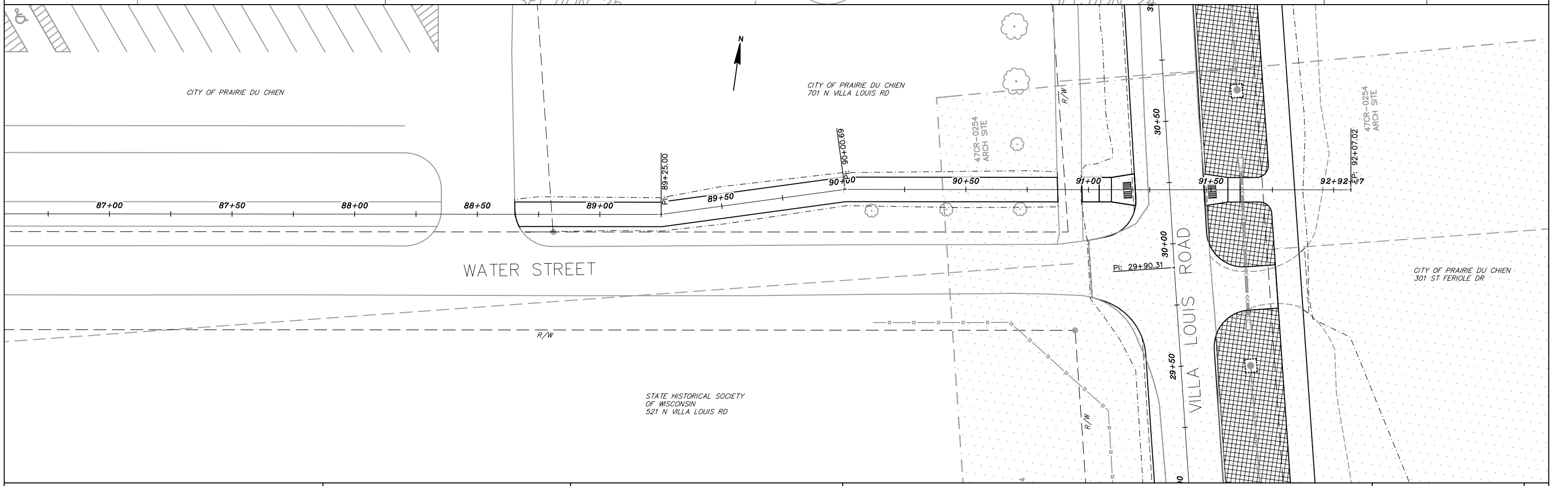
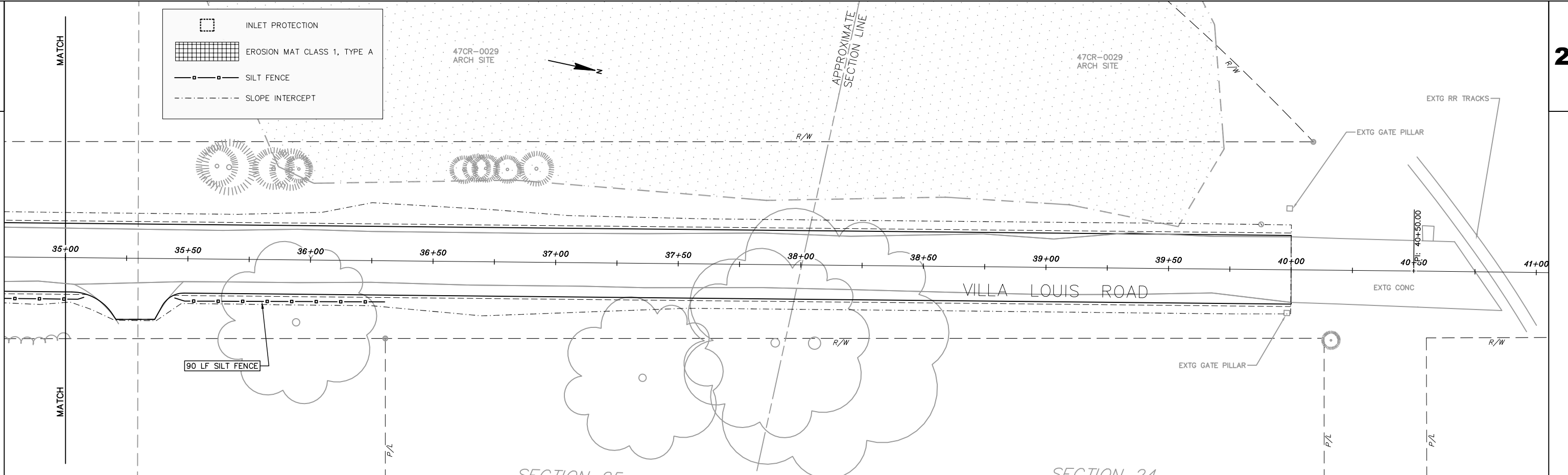
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 INLET PROTECTION

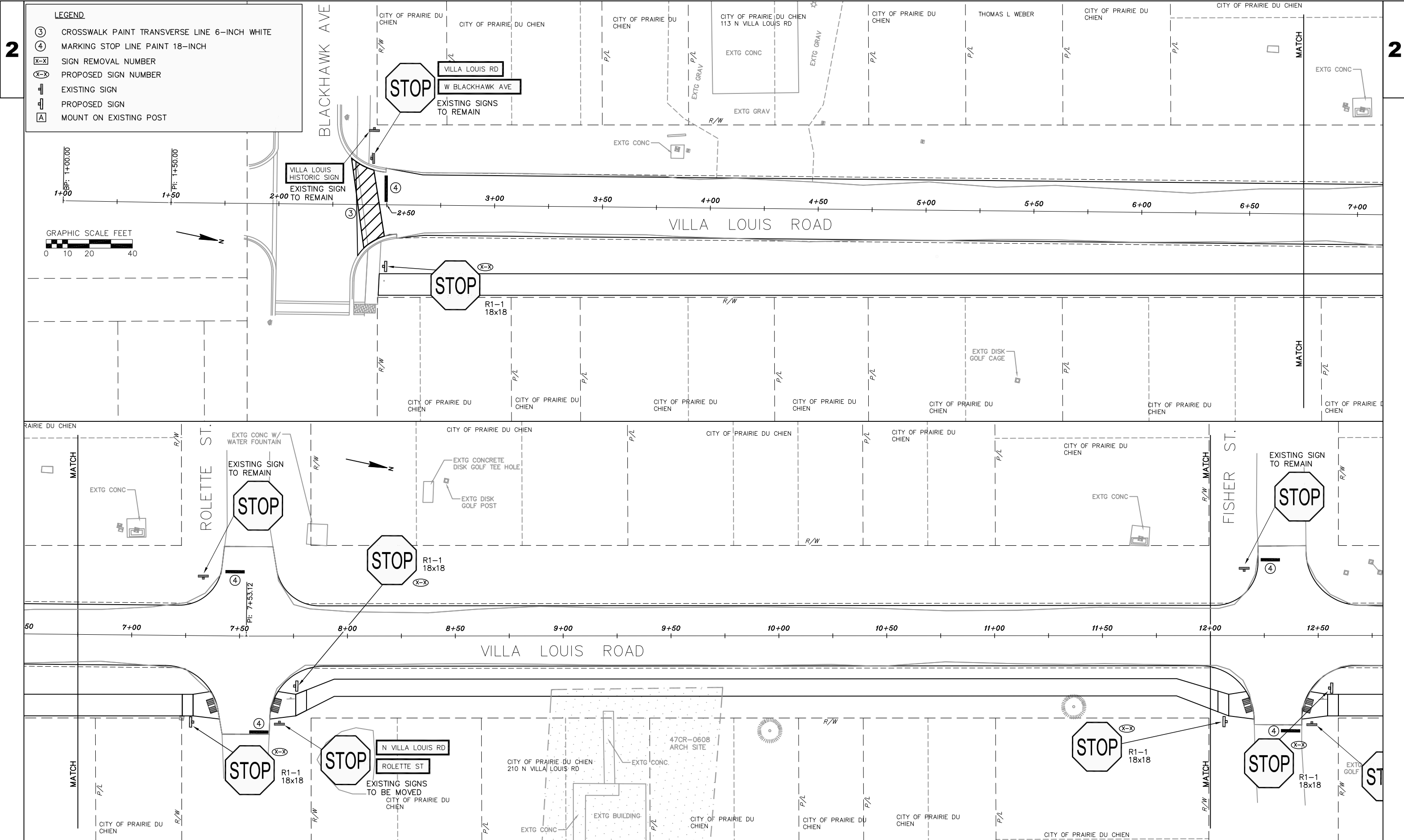
 EROSION MAT CLASS 1, TYPE A

 SILT FENCE

 SLOPE INTERCEPT



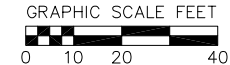
PROJECT NO:5997-00-41	HWY:VILLA LOUIS ROAD	COUNTY:CRAWFORD	EROSION CONTROL PLAN	SHEET	<b>E</b>
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2

2

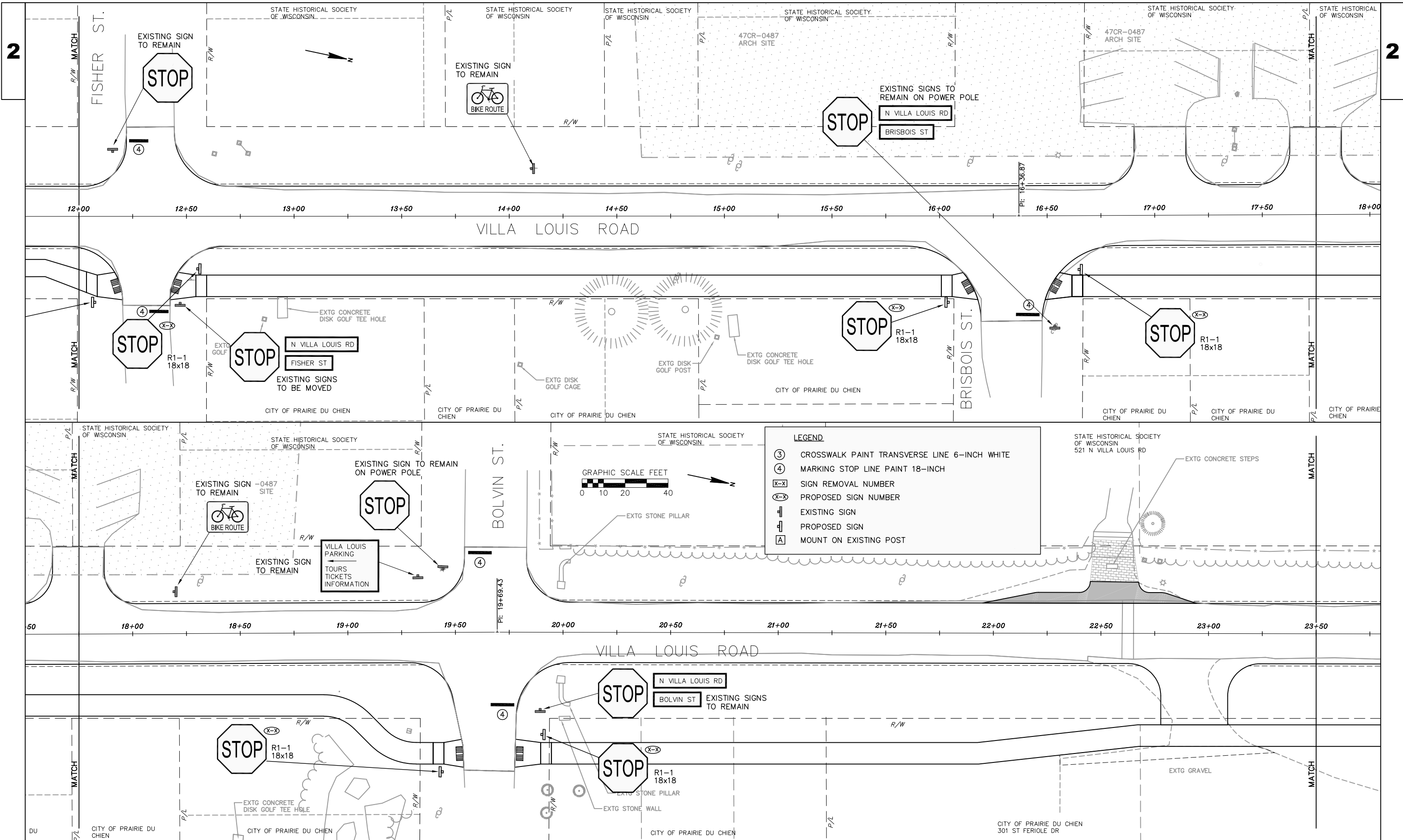
- LEGEND**
- ③ CROSSWALK PAINT TRANSVERSE LINE 6-INCH WHITE
  - ④ MARKING STOP LINE PAINT 18-INCH
  - X-X SIGN REMOVAL NUMBER
  - ⊕ PROPOSED SIGN NUMBER
  - ⊖ EXISTING SIGN
  - ⊕ PROPOSED SIGN
  - A MOUNT ON EXISTING POST



PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PAVEMENT MARKING AND SIGNING PLAN      SHEET      E

FILE NAME : R:\PRAIRIE DU CHIEN, CITY OF\170153 VILLA LOUIS ROAD IMPROVEMENTS\CADD\PDCH VILLA LOUIS ROAD SIGNING & MARKING PLAN.DWG PLOT DATE : 8/26/2022 2:37 PM      PLOT BY : PAUL JUNION      PLOT NAME :

WISDOT/CADDS SHEET 42



PROJECT NO: 5997-00-41

HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

PAVEMENT MARKING AND SIGNING PLAN

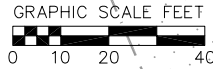
SHEET

E



CITY OF PRAIRIE DU CHIEN  
801 N VILLA LOUIS RD.

47CR-0029  
ARCH SITE



W11-15  
30x30

W16-9P  
24x12

**LEGEND**

- ③ CROSSWALK PAINT TRANSVERSE LINE 6-INCH WHITE
- ④ MARKING STOP LINE PAINT 18-INCH
- X-X SIGN REMOVAL NUMBER
- ⊗ PROPOSED SIGN NUMBER
- ⊥ EXISTING SIGN
- ⊥ PROPOSED SIGN
- A MOUNT ON EXISTING POST

35+00 35+50 36+00 36+50 37+00 37+50 38+00 38+50 39+00 39+50 40+00 40+50 41+00

VILLA LOUIS ROAD



EXISTING SIGN  
TO REMAIN

EXTG RR TRACKS

EXTG GATE PILLAR

EXTG CONC

EXTG GATE PILLAR

PRAIRIE SAND & GRAVEL  
800 N VILLA LOUIS RD

CITY OF PRAIRIE DU CHIEN

SECTION 25

CITY OF PRAIRIE DU CHIEN

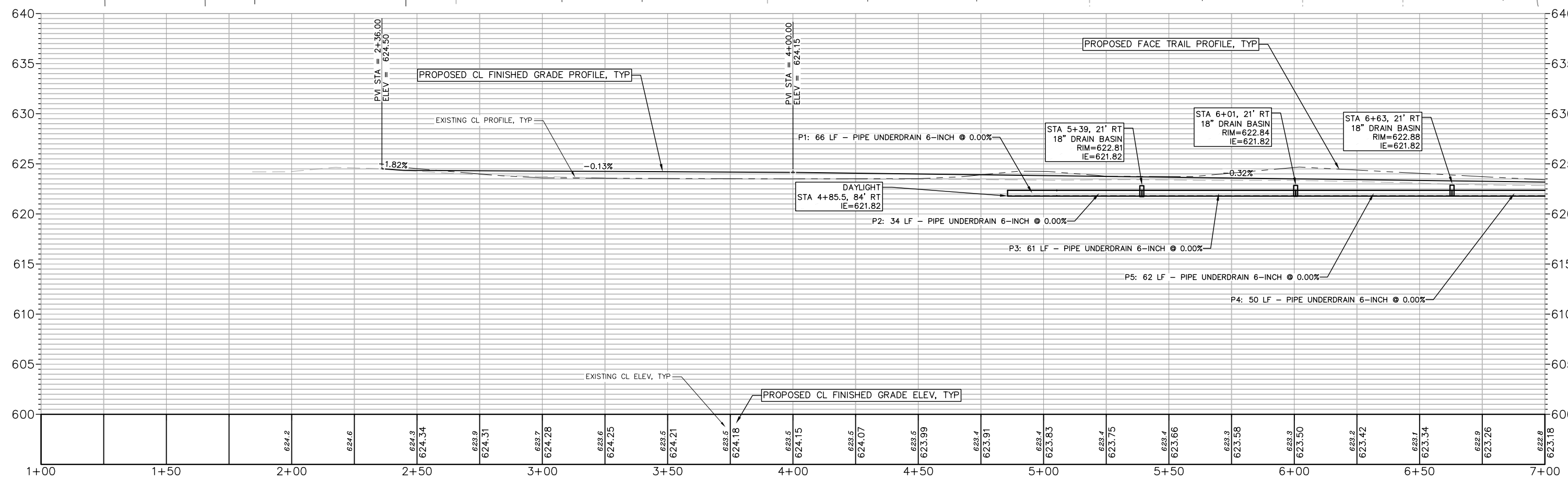
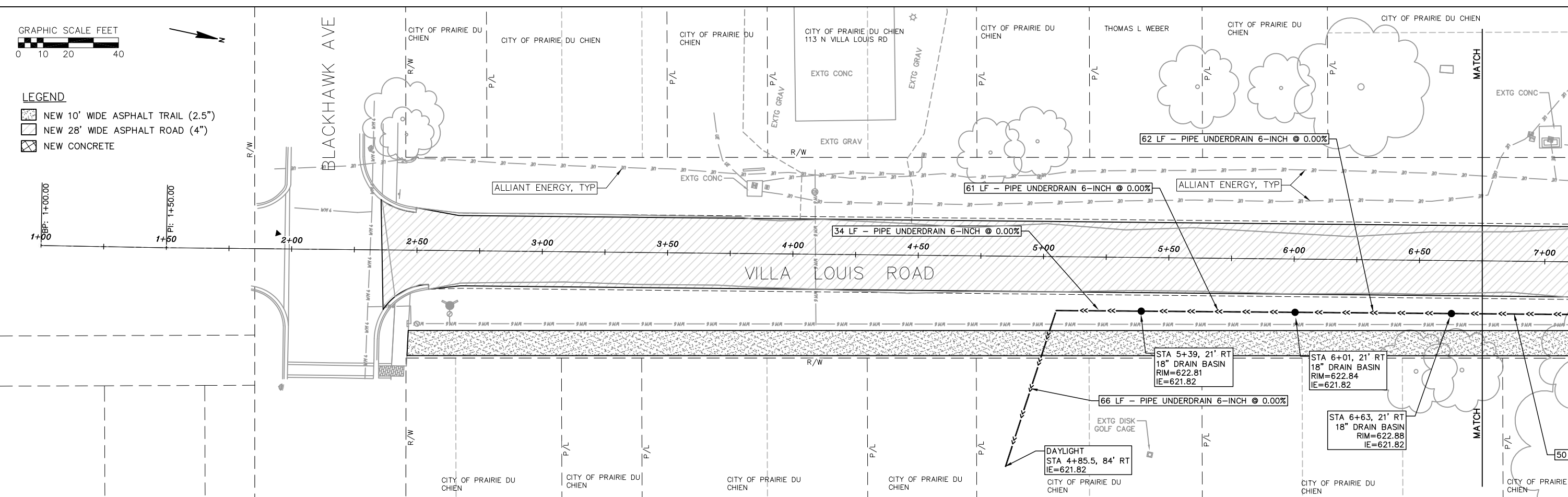
SECTION 24

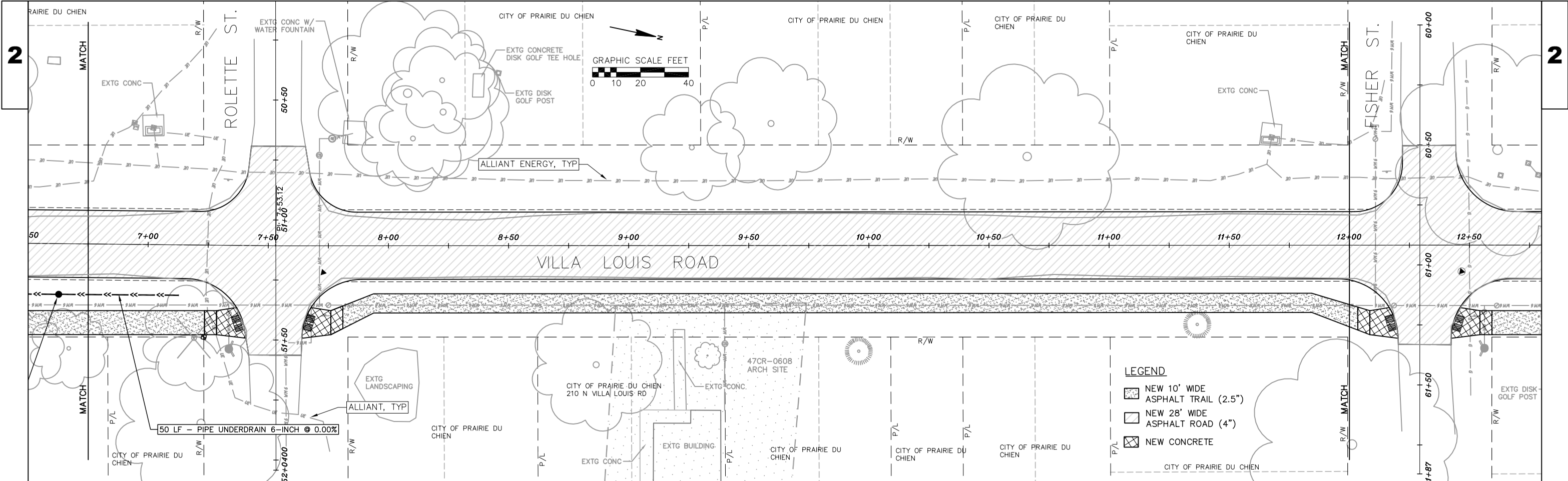




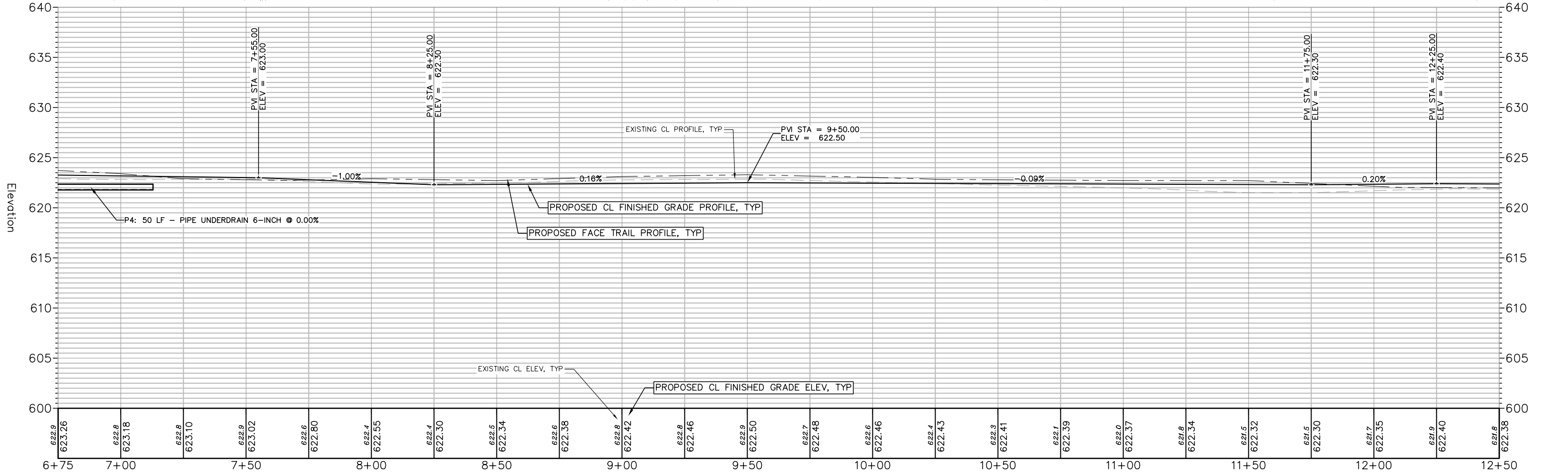
LEGEND

- NEW 10' WIDE ASPHALT TRAIL (2.5")
- NEW 28' WIDE ASPHALT ROAD (4")
- NEW CONCRETE

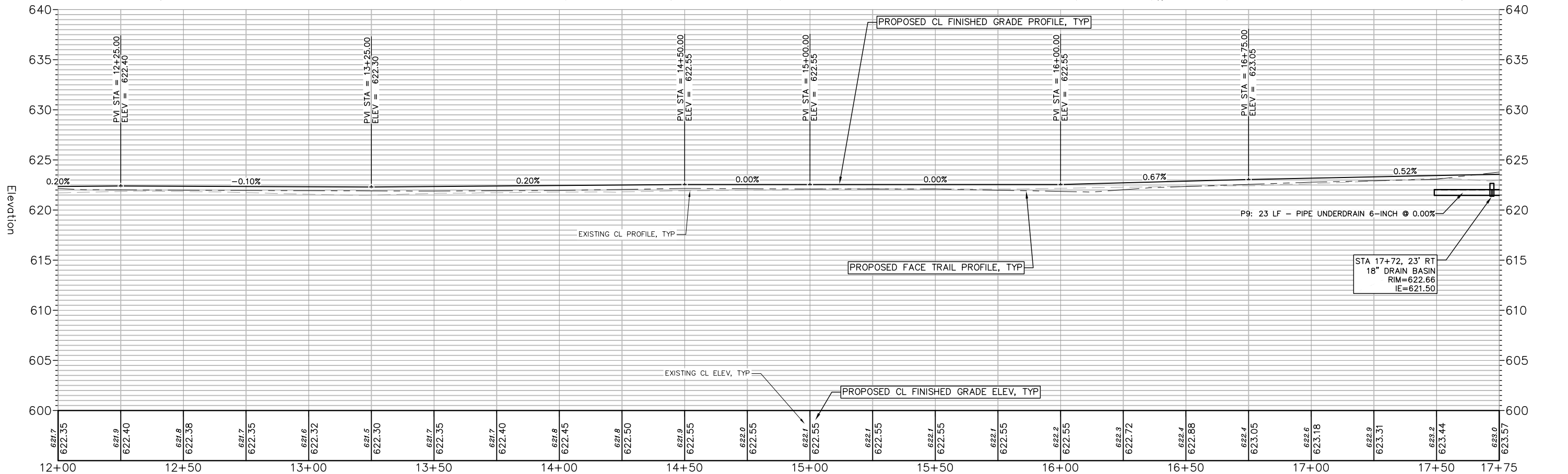
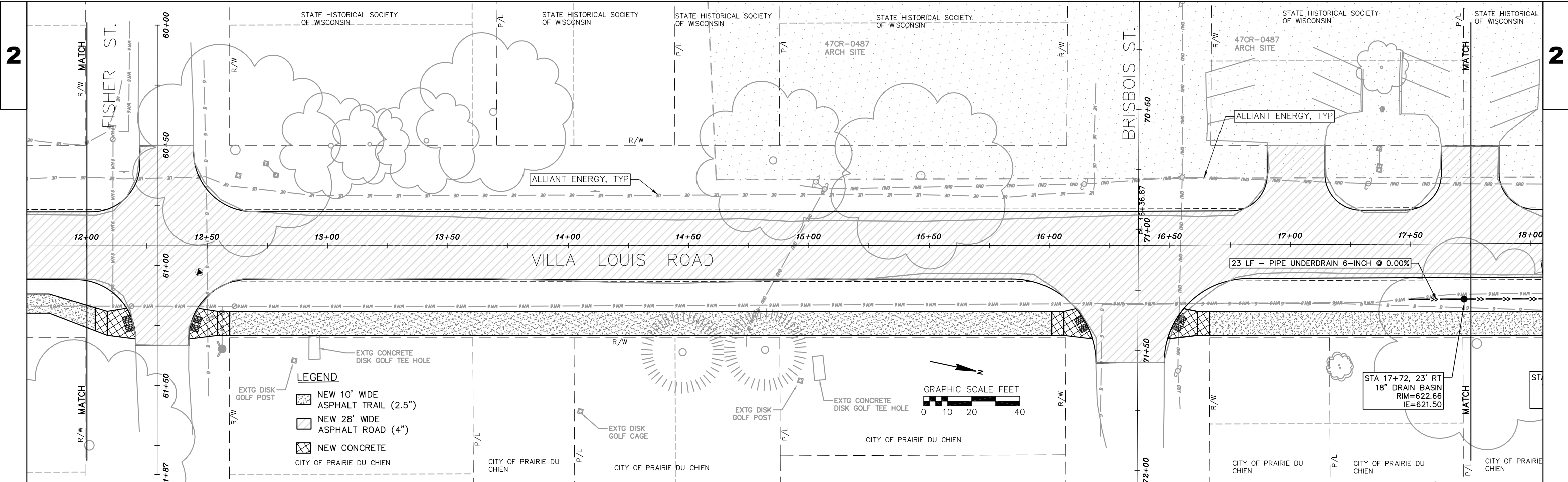




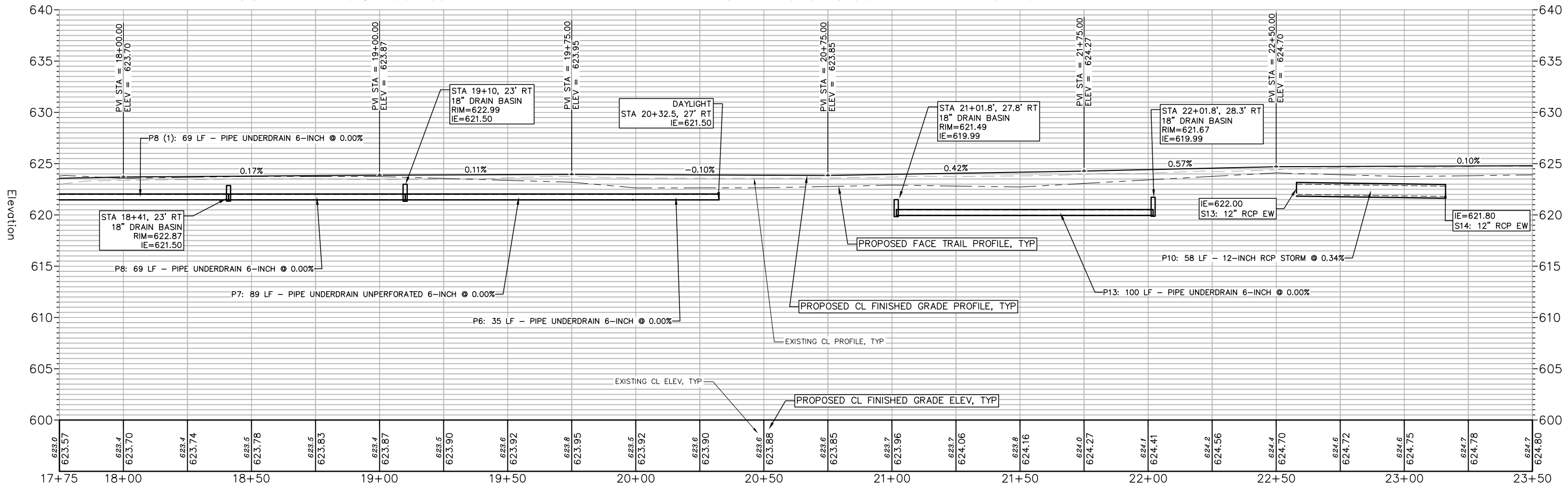
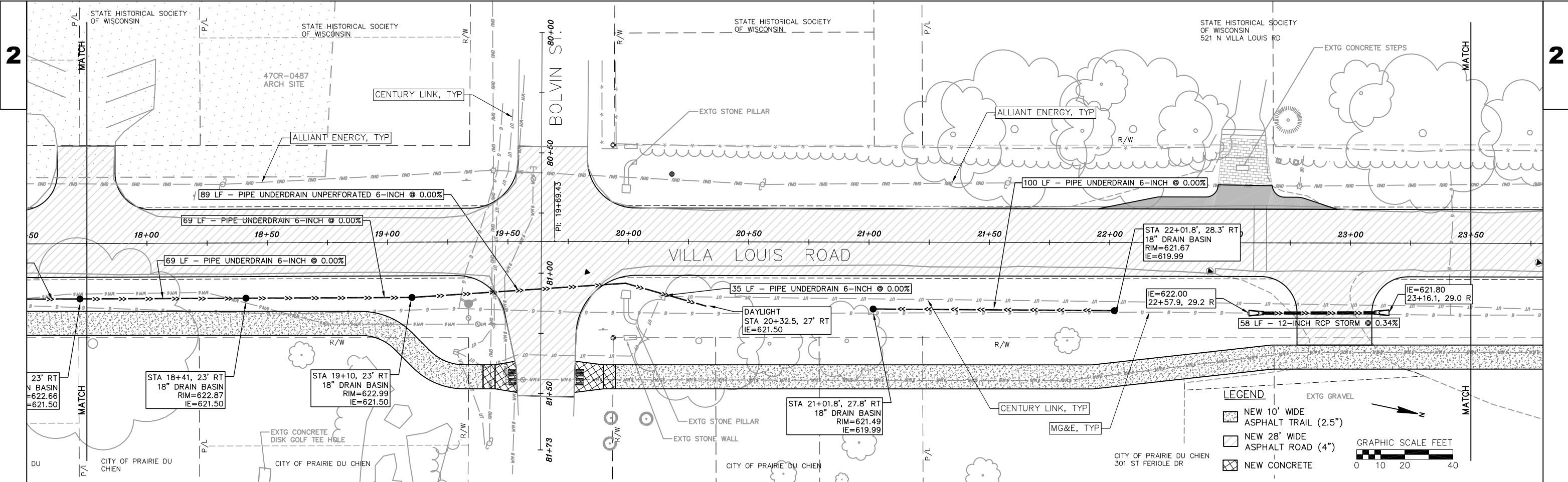
- LEGEND**
- - 
  -



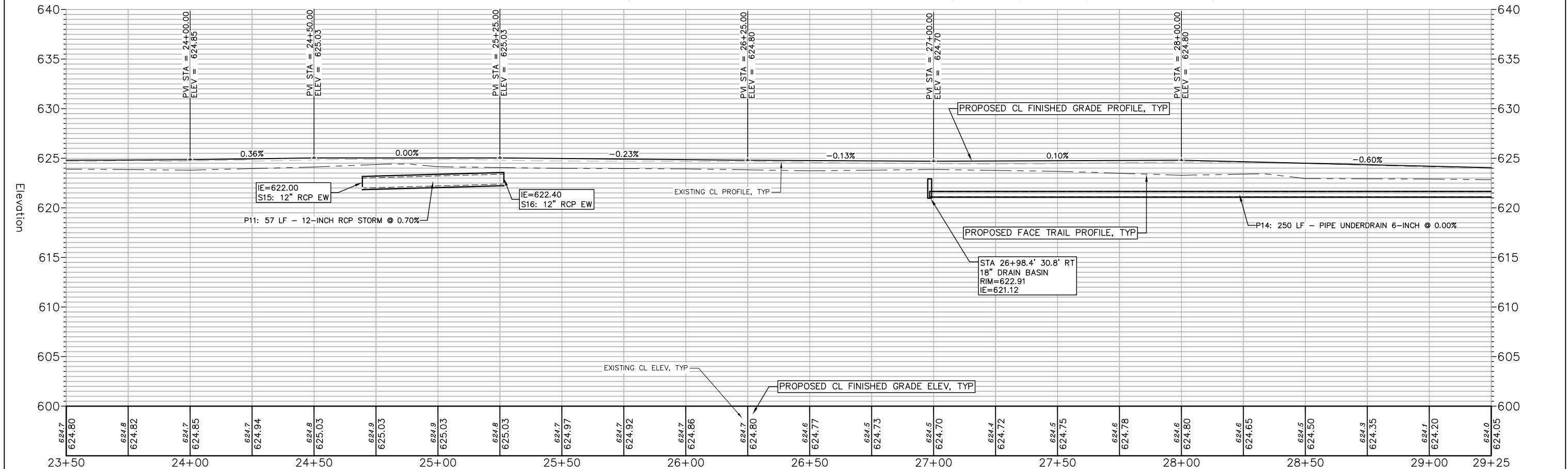
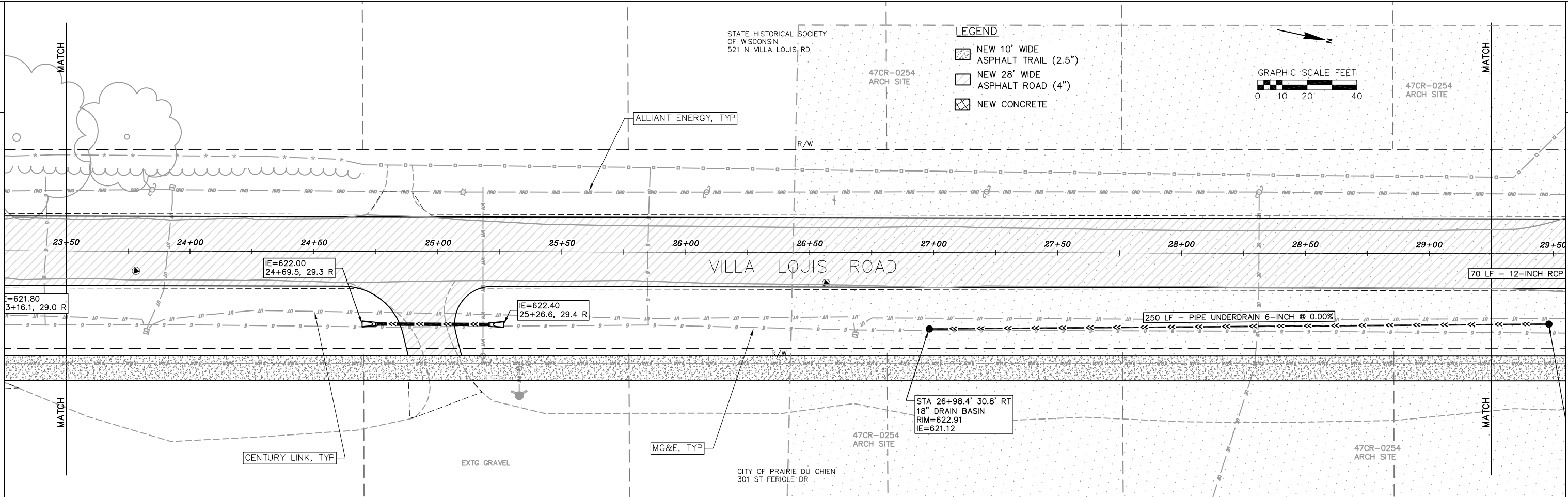
PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PLAN & PROFILE VILLA LOUIS ROAD STORM SEWER      SHEET **E**

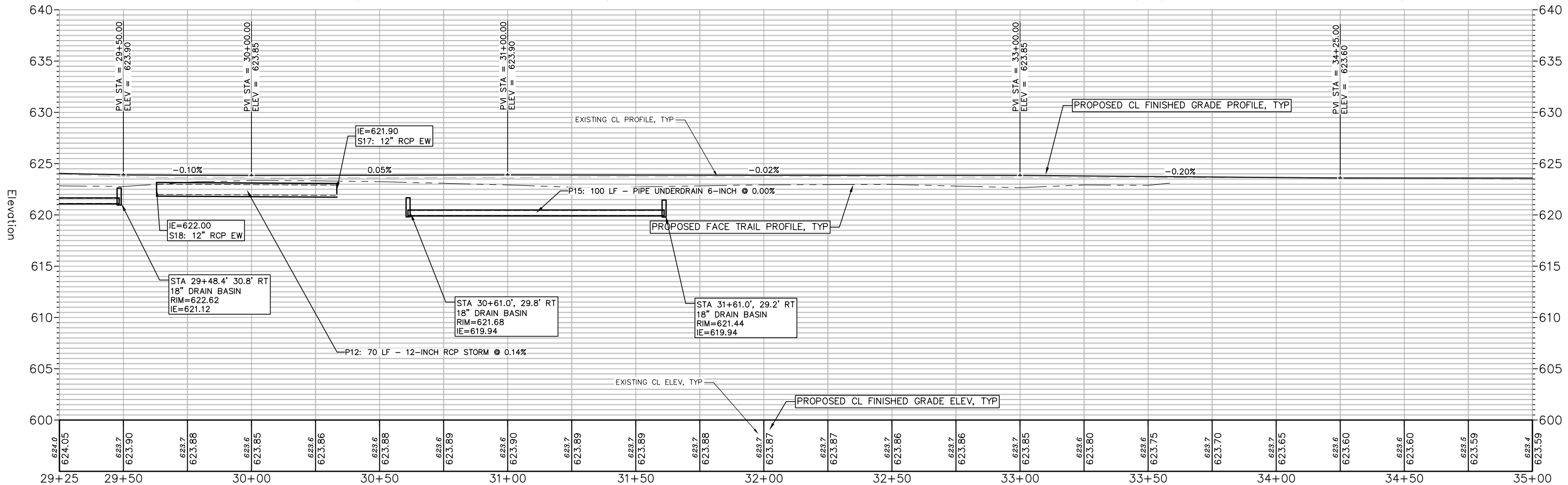
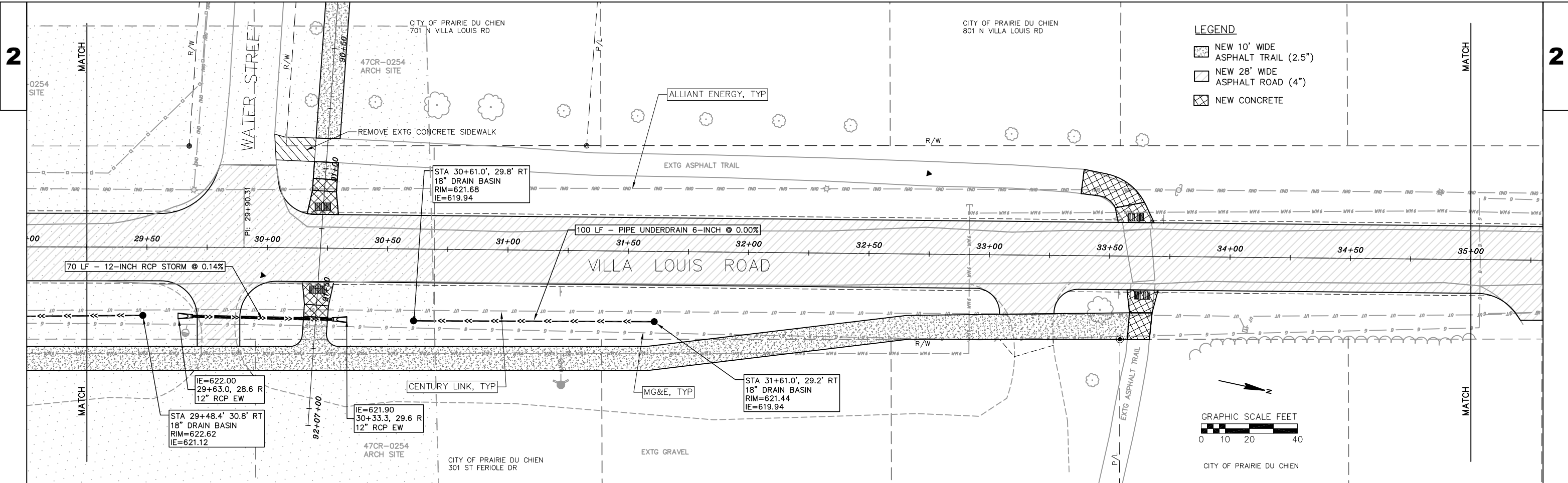


PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PLAN & PROFILE VILLA LOUIS ROAD STORM SEWER      SHEET **E**



PROJECT NO: 5997-00-41 HWY: VILLA LOUIS ROAD COUNTY: CRAWFORD PLAN & PROFILE VILLA LOUIS ROAD STORM SEWER SHEET E

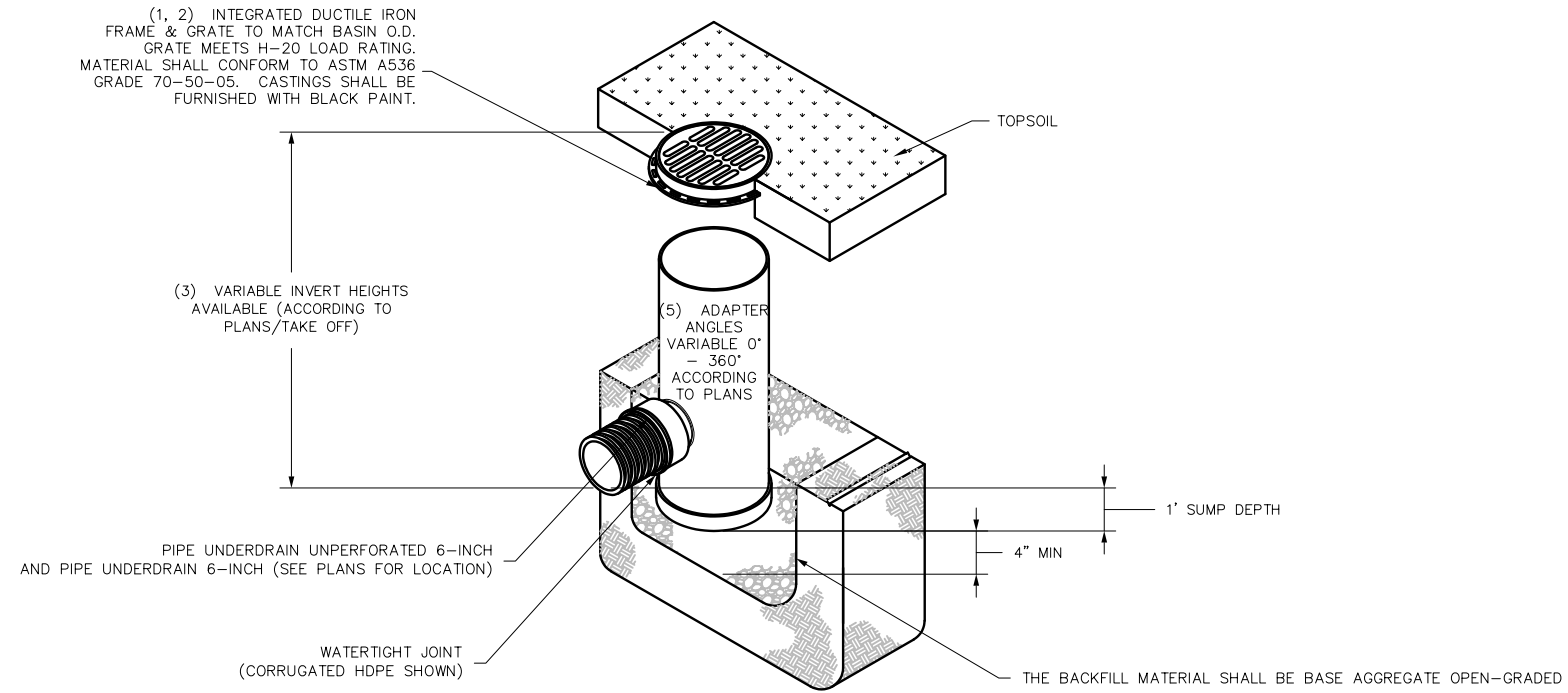




PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PLAN & PROFILE VILLA LOUIS ROAD STORM SEWER      SHEET **E**

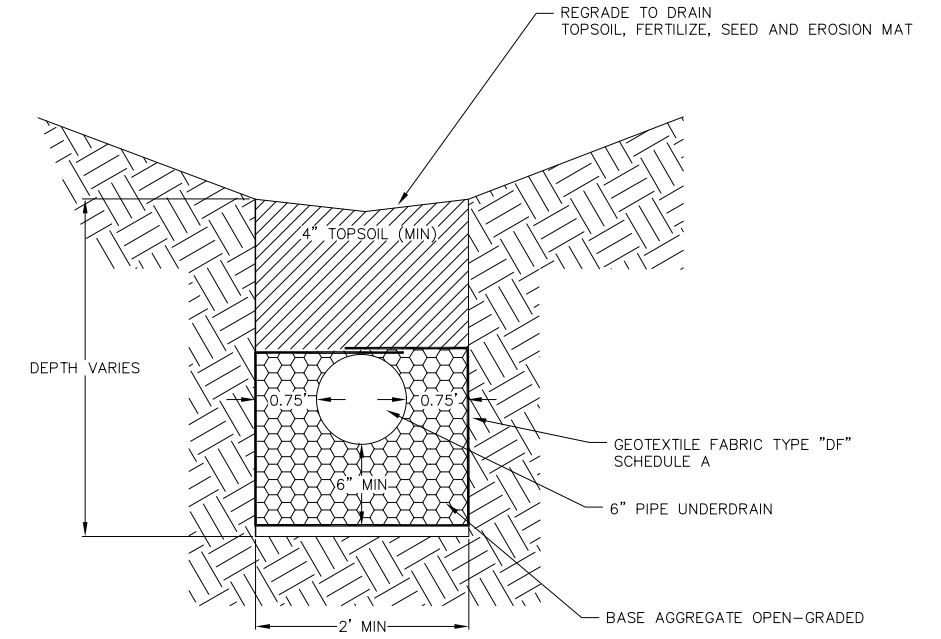
FILE NAME : R:\PRAIRIE DU CHIEN, CITY OF\170153 VILLA LOUIS ROAD IMPROVEMENTS\CADD\PDCH VILLA LOUIS ROAD BASE ENGINEERING.DWG      PLOT DATE : 8/26/2022 8:17 AM      PLOT BY : PAUL JUNION      PLOT NAME :      PLOT SCALE : AS SHOWN      WISDOT/CADS SHEET 42

LAYOUT NAME - ####

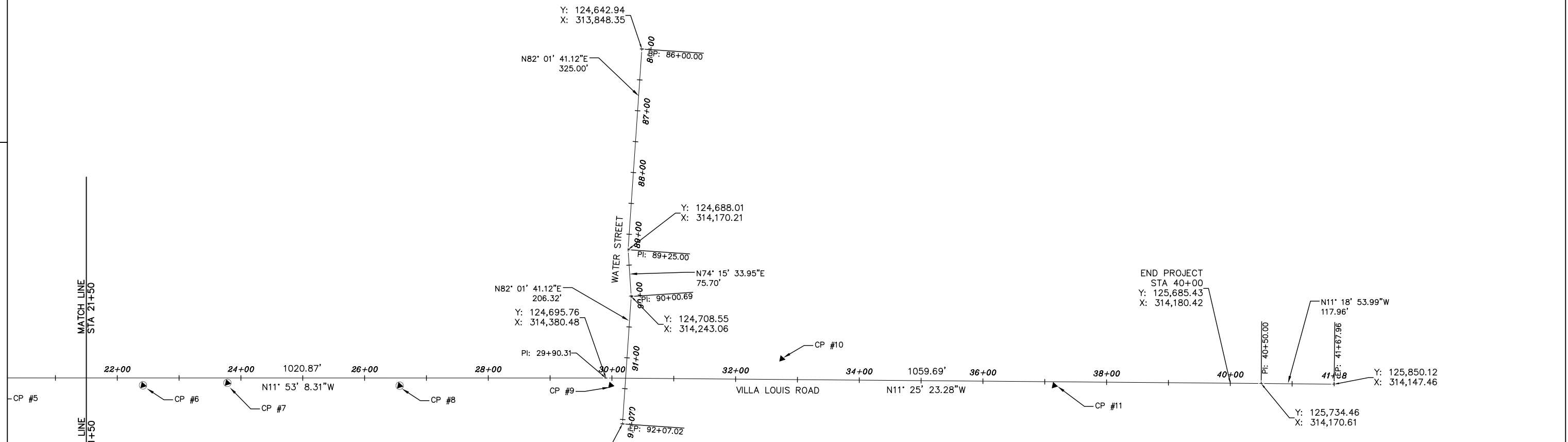
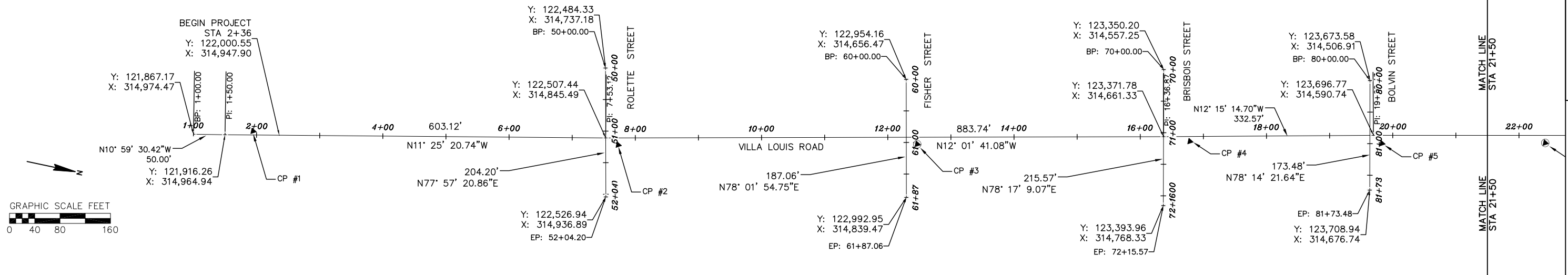


- 1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
- 4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE & PVC SEWER.
- 5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°.

1 PVC 18" DRAIN BASIN  
1 NOT TO SCALE



1 PIPE UNDERDRAIN TRENCH DETAIL  
1 NOT TO SCALE

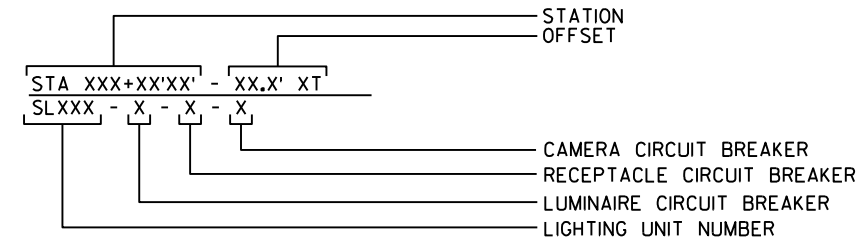


NO.	DESCRIPTION	LOCATION	STATION/OFFSET	Y COORD	X COORD
1	MAG NAIL	2.9' SOUTH OF GUTTER FLAG ON BLACKHAWK, 11.6' NORTHEAST OF CURB FLAG DRIVEWAY	1+94.4, 5.5' LT	121,958.5710	314,950.1170
2	MAG NAIL	19.7' NORTH OF ROLETTE ST, 6.3' SOUTHWEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	7+72.8, 13.1' RT	122,529.0430	314,852.2510
3	8" NAIL	17.4' NORTH OF FISHER ST, 9.5' SOUTHWEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	12+46.7, 12.7' RT	122,992.4650	314,753.3590
4	MAG NAIL	41.8' NORTH OF BRISBOIS ST, 5.5' SOUTHWEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	16+78.6, 9.0' RT	123,414.1970	314,660.0330
5	MAG NAIL	19.0' NORTH OF BOLVIN ST, 7.9' SOUTHWEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	19+82.8, 12.7' RT	123,712.5050	314,600.4220
6	8" NAIL	277.8' NORTH OF BOLVIN ST, 0.8' WEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	22+41.6, 12.4' RT	123,965.5450	314,546.3240
7	8" NAIL	414.4' NORTH OF BOLVIN ST, 3.7' WEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	23+78.2, 8.8' RT	124,098.4340	314,514.3920
8	8" NAIL	326.5' SOUTH OF WATER ST, 0.7' WEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	26+56.6, 13.8' RT	124,371.8060	314,461.3500
9	MAG NAIL	14.1' NORTH OF WATER ST, 3.2' WEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	29+98.2, 13.6' RT	124,705.7910	314,390.2800
10	MAG NAIL	287.2' NORTH OF WATER ST, 22.4' WEST OF VILLA LOUIS WEST EDGE OF PAVEMENT	32+74.4, 32.1' LT	124,967.6650	314,291.3440
11	MAG NAIL	729.7' NORTH OF WATER ST, 3.5' WEST OF VILLA LOUIS EAST EDGE OF PAVEMENT	37+15.4, 6.7' RT	125,407.6860	314,242.8500

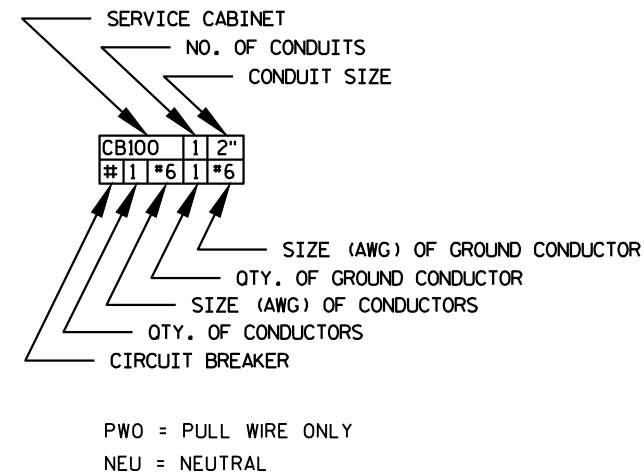


LIGHTING PLAN LEGEND:

- ☼ EXISTING DECORATIVE LIGHTING UNIT
- ☼ PROPOSED DECORATIVE LIGHTING UNIT
- ☒ POST MOUNTED CONTROL CABINET/ELECTRICAL SERVICE
- ⓪ PULL BOX NON-CONDUCTIVE (24"X42")
- Ⓢ PULL BOX STEEL COMMUNICATIONS (36"X42") (FUTURE FIBER)
- CONDUIT SCHEDULE 40 2-INCH (UNLESS OTHERWISE NOTED)
- CONDUIT SCHEDULE 40 2-INCH (UNLESS OTHERWISE NOTED) (FUTURE FIBER)



CONDUIT/CONDUCTOR LEGEND

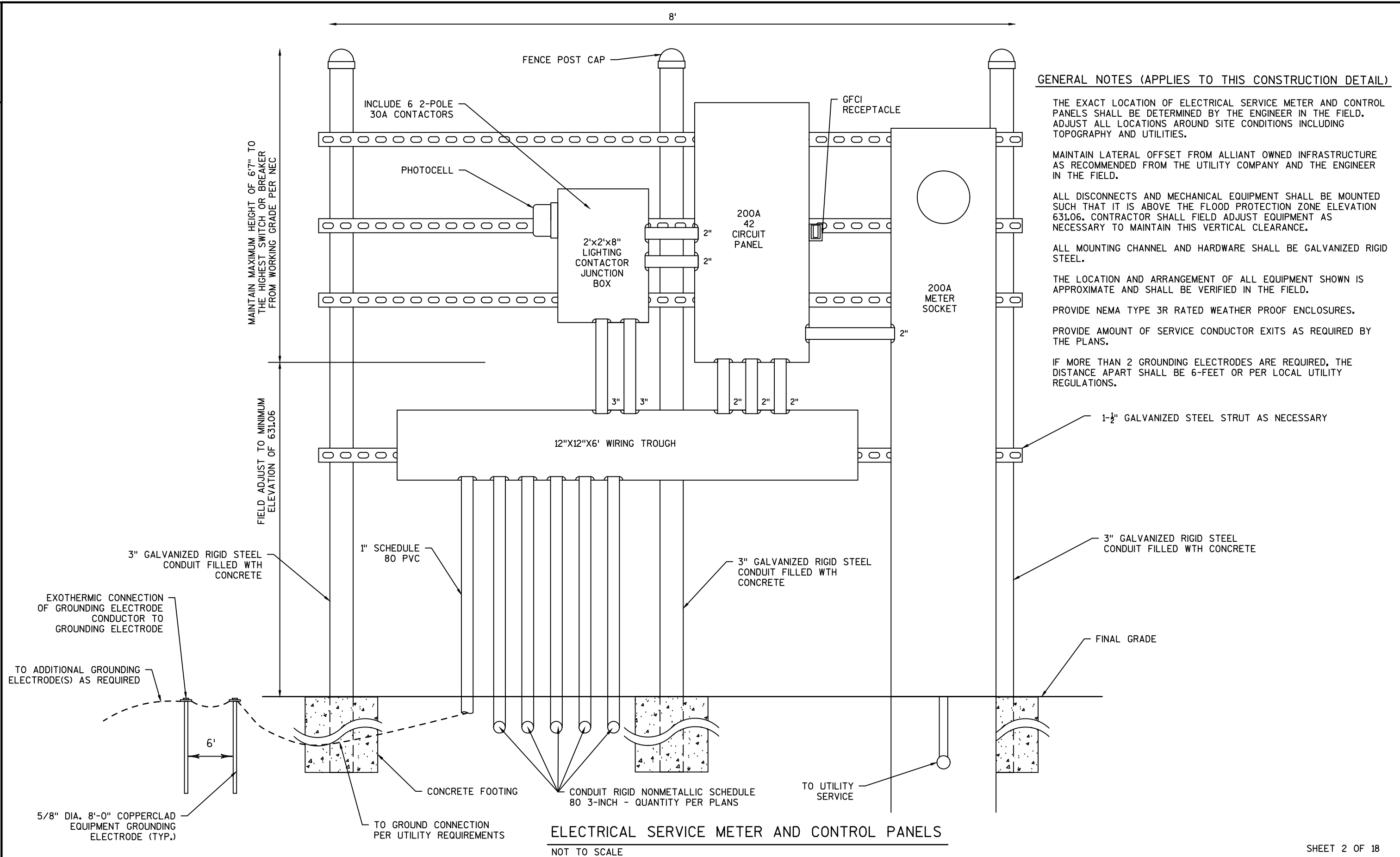


CONDUCTOR COLOR LEGEND

CB100	
<u>LIGHTING CONDUCTORS</u>	
1/3 - RED	
2/4 - BLACK	
5/7 - RED	
<u>240V PHASE TO PHASE</u>	
<u>RECEPTACLE CONDUCTORS</u>	
6 - BLUE	} SHARED NEUTRAL
8 - BROWN	
9 - BLUE & NEUTRAL	
<u>120V PHASE TO NEUTRAL</u>	
<u>CAMERA CONDUCTORS</u>	
10 - ORANGE & NEUTRAL	
11 - ORANGE & NEUTRAL	
<u>120V PHASE TO NEUTRAL</u>	

GENERAL STREET LIGHTING NOTES:

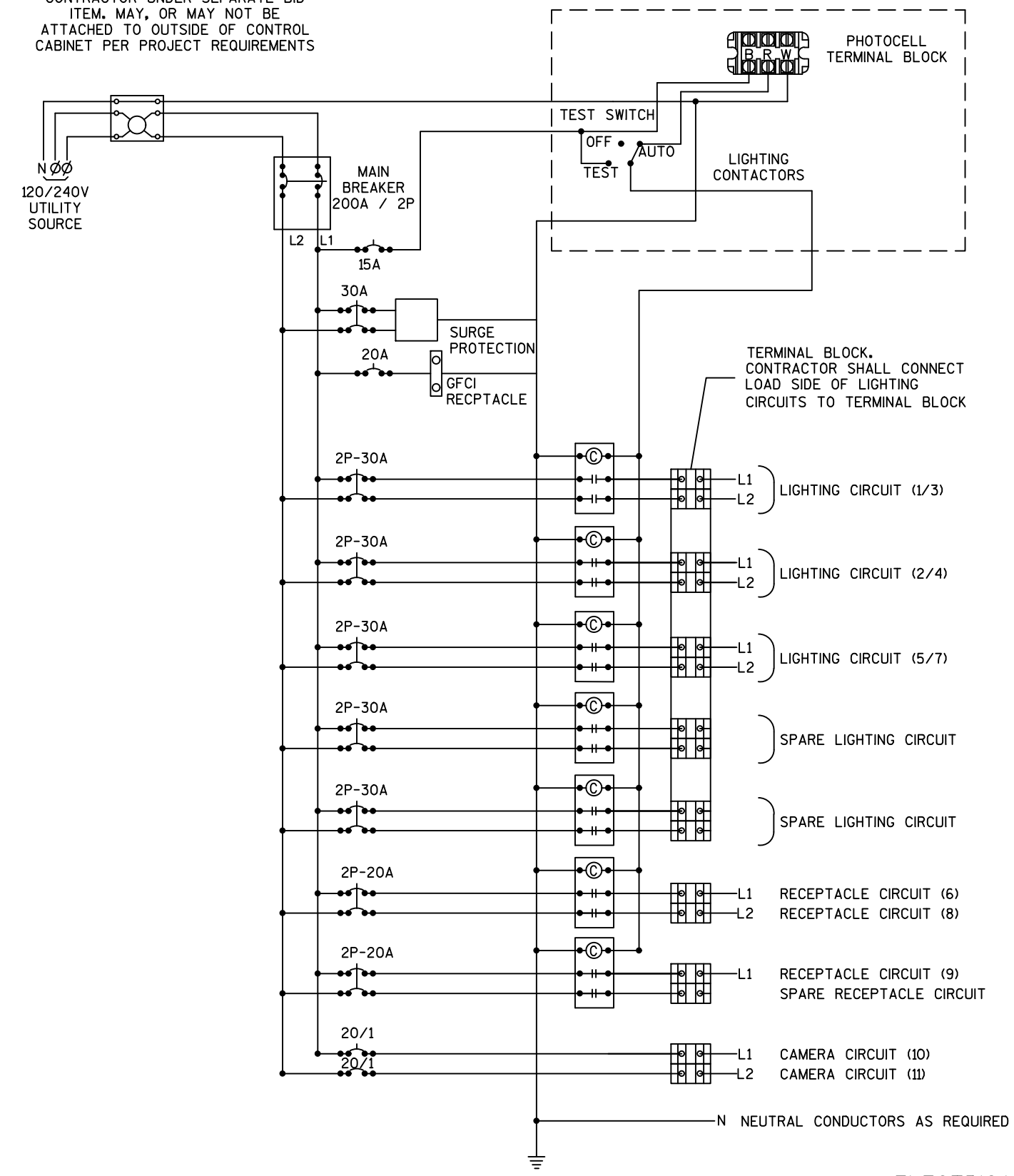
- 1) THE ENGINEER SHALL APPROVE THE FINAL LOCATION FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION.
- 2) THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- 3) NO SPLICES ALLOWED IN PULL BOXES.
- 4) EDGE OF GRAVEL SHOULDER NOT SHOWN FOR PLAN CLARITY.



UTILITY METER  
 PEDESTAL 200A PROVIDED BY  
 CONTRACTOR UNDER SEPARATE BID  
 ITEM. MAY, OR MAY NOT BE  
 ATTACHED TO OUTSIDE OF CONTROL  
 CABINET PER PROJECT REQUIREMENTS

**CONSTRUCTION NOTES:**

1) CAMERA CIRCUITS SHALL BE WIRED FOR 24/7 POWER. CONTRACTOR SHALL KEEP CAMERA CIRCUIT BREAKER OFF UNTIL CAMERAS ARE INSTALLED (BY OTHERS).



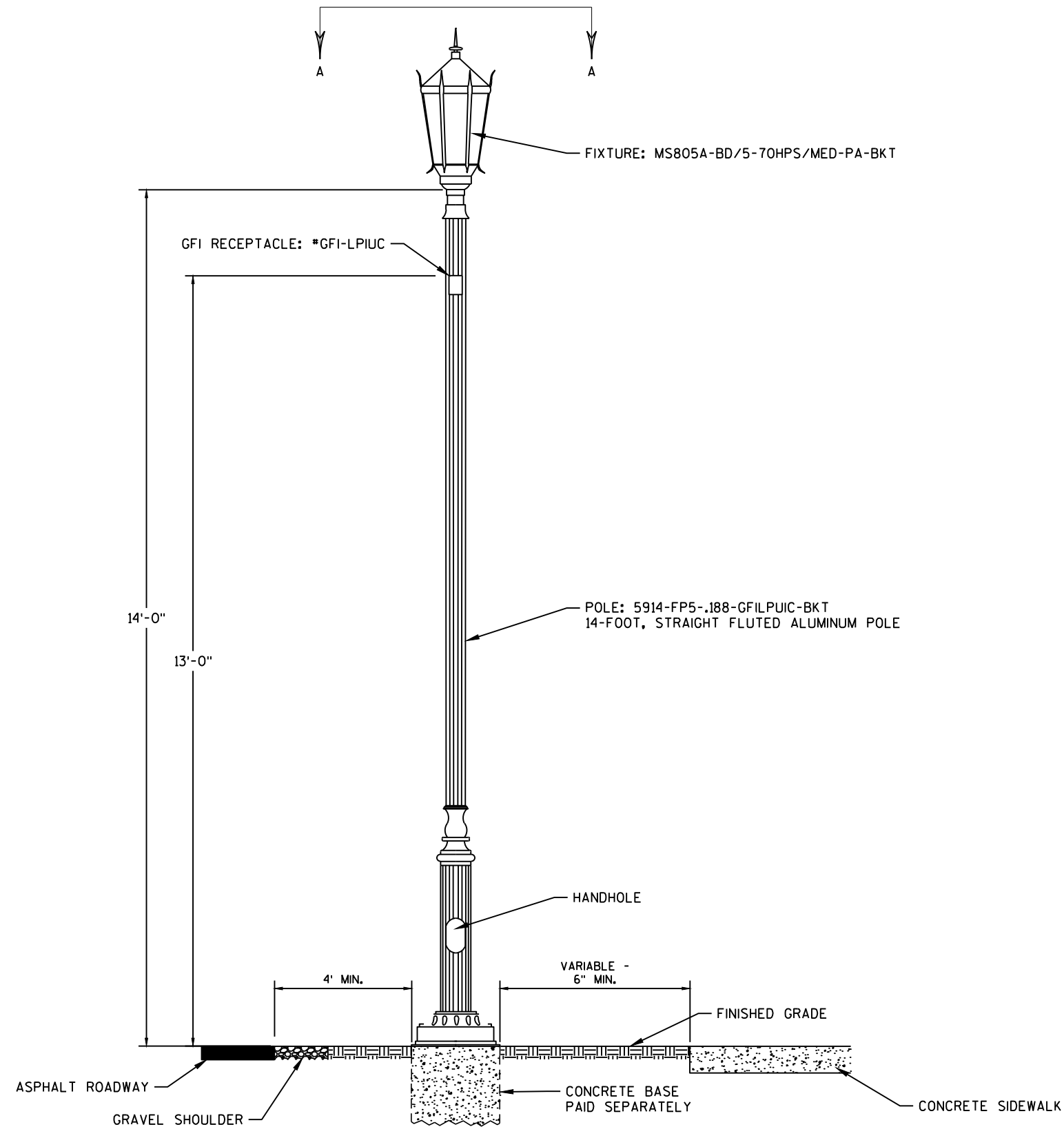
**ELECTRICAL SERVICE METER AND CONTROL PANELS**

NOT TO SCALE

CB100

SHEET 3 OF 18

CONTROL PANEL

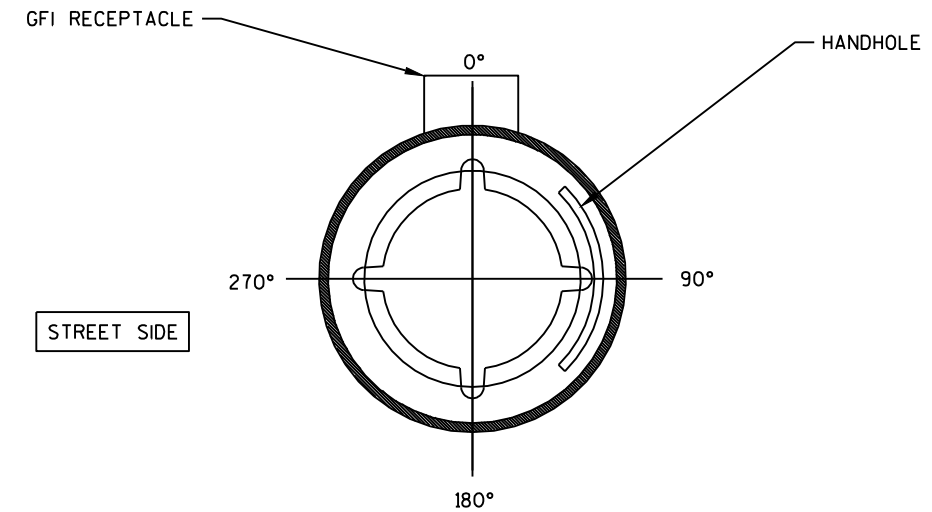


DECORATIVE UNIT DETAIL

NOT TO SCALE

NOTES:

- 1) ORIENTATION OF RECEPTACLE AND HAND HOLE SHALL BE VERIFIED BY THE ENGINEER.
- 2) LIGHT POLE ASSEMBLY SHALL HAVE A BLACK TEXTURED FINISH.
- 3) ALL LIGHTING UNIT PRODUCTS SHALL BE VERIFIED AND APPROVED BY THE ENGINEER PRIOR TO PURCHASING.



SECTION A-A

OVERHEAD VIEW

CB100	1	2"
1/3	2	*8 1 *6
9	1	*6 - -
NEU	1	*6 - -

240V LIGHTING  
120V RECEPTACLES

CB100	1	2"
2/4	2	*8 1 *6
5/7	2	*8 - -
6	1	*6 - -
8	1	*6 - -
NEU	1	*6 - -
10	1	*8 - -
NEU	1	*8 - -

240V LIGHTING  
120V RECEPTACLES  
120V CAMERA

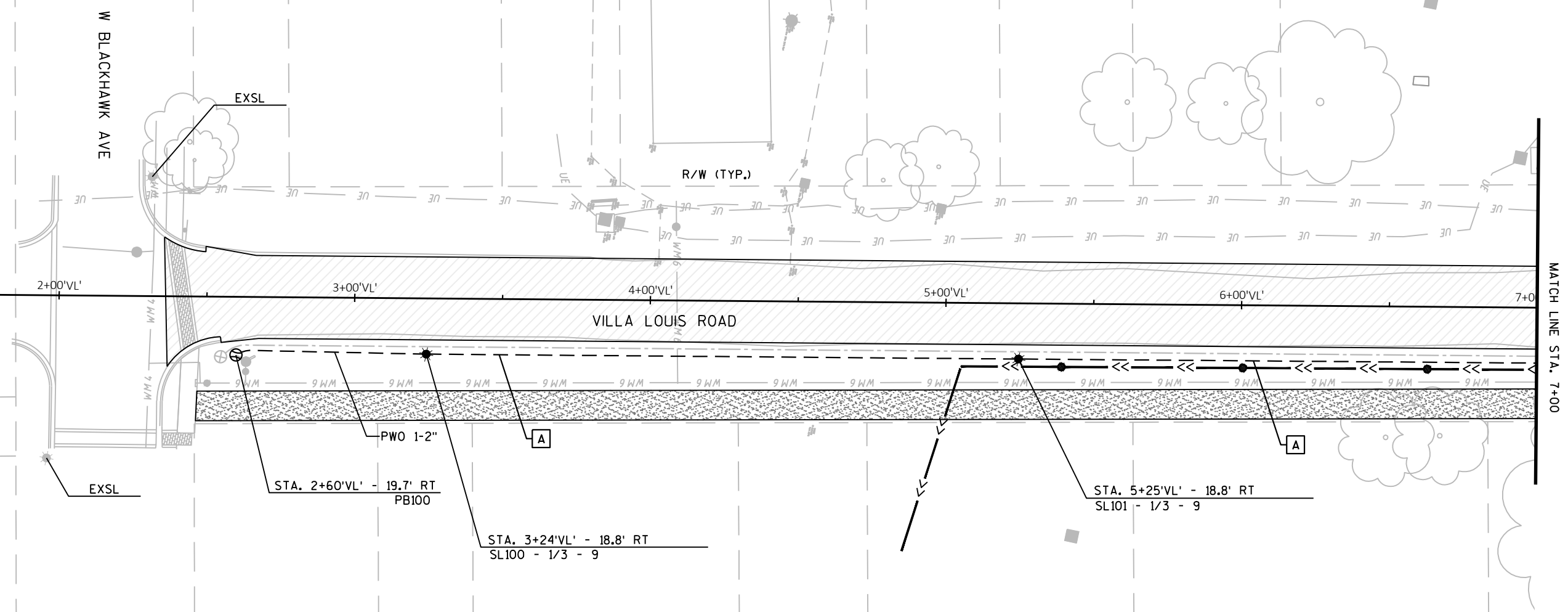
CB100	1	2"
2/4	2	*8 1 *6
5/7	2	*8 - -
6	1	*6 - -
8	1	*6 - -
NEU	1	*6 - -
10	1	*8 - -
NEU	1	*8 - -
11	1	*8 - -
NEU	1	*8 - -

240V LIGHTING  
120V RECEPTACLES  
120V CAMERAS

CB100	1	2"
2/4	2	*8 1 *6
5/7	2	*8 - -
6	1	*6 - -
8	1	*6 - -
NEU	1	*6 - -

240V LIGHTING  
120V RECEPTACLES

**CONSTRUCTION NOTES:**  
1) INSTALL SUBMERSIBLE FUSES AND SPLICE BLOCKS AT ALL STREET LIGHTS TO PREVENT WATER DAMAGE FROM FLOODING.



MATCH LINE STA. 7+00

**A** =

CB100	1	2"
1/3	2	#8
1	#6	-
9	1	#6
NEU	1	#6

— 240V LIGHTING  
— 120V RECEPTACLES

**C** =

CB100	1	2"
2/4	2	#8
5/7	2	#8
6	1	#6
8	1	#6
NEU	1	#6
10	1	#8
NEU	1	#8

— 240V LIGHTING  
— 120V RECEPTACLES  
— 120V CAMERA

**CONSTRUCTION NOTES:**  
1) INSTALL SUBMERSIBLE FUSES AND SPLICE BLOCKS AT ALL STREET LIGHTS TO PREVENT WATER DAMAGE FROM FLOODING.

**KEYED NOTES:**  
② FIELD LOCATE INFRASTRUCTURE ACCORDING TO THE MINIMUM OFFSET REQUIRED BY THE UTILITY AND THE ENGINEER IN THE FIELD.

**B** =

CB100	1	2"
2/4	2	#8
5/7	2	#8
6	1	#6
8	1	#6
NEU	1	#6
10	1	#8
NEU	1	#8
11	1	#8
NEU	1	#8

— 240V LIGHTING  
— 120V RECEPTACLES  
— 120V CAMERAS

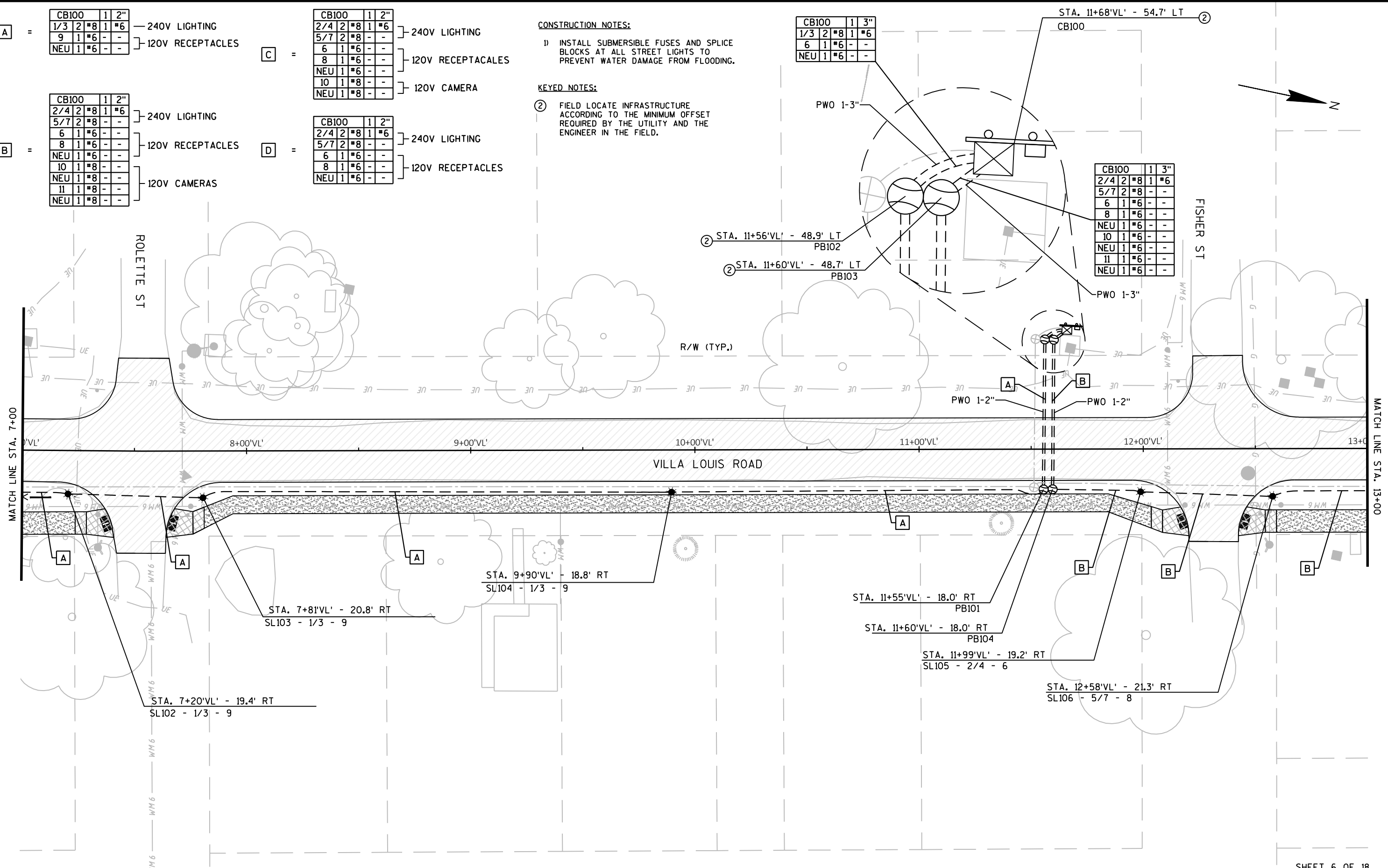
**D** =

CB100	1	2"
2/4	2	#8
5/7	2	#8
6	1	#6
8	1	#6
NEU	1	#6

— 240V LIGHTING  
— 120V RECEPTACLES

CB100	1	3"
1/3	2	#8
1	#6	-
6	1	#6
NEU	1	#6

CB100	1	3"
2/4	2	#8
5/7	2	#8
6	1	#6
8	1	#6
NEU	1	#6
10	1	#6
NEU	1	#6
11	1	#6
NEU	1	#6



**A** =

CB100	1	2"
1/3	2	#8 1 #6
9	1	#6 - -
NEU	1	#6 - -

240V LIGHTING  
120V RECEPTACLES

**C** =

CB100	1	2"
2/4	2	#8 1 #6
5/7	2	#8 - -
6	1	#6 - -
8	1	#6 - -
NEU	1	#6 - -
10	1	#8 - -
NEU	1	#8 - -

240V LIGHTING  
120V RECEPTACLES  
120V CAMERA

**B** =

CB100	1	2"
2/4	2	#8 1 #6
5/7	2	#8 - -
6	1	#6 - -
8	1	#6 - -
NEU	1	#6 - -
10	1	#8 - -
NEU	1	#8 - -
11	1	#8 - -
NEU	1	#8 - -

240V LIGHTING  
120V RECEPTACLES  
120V CAMERAS

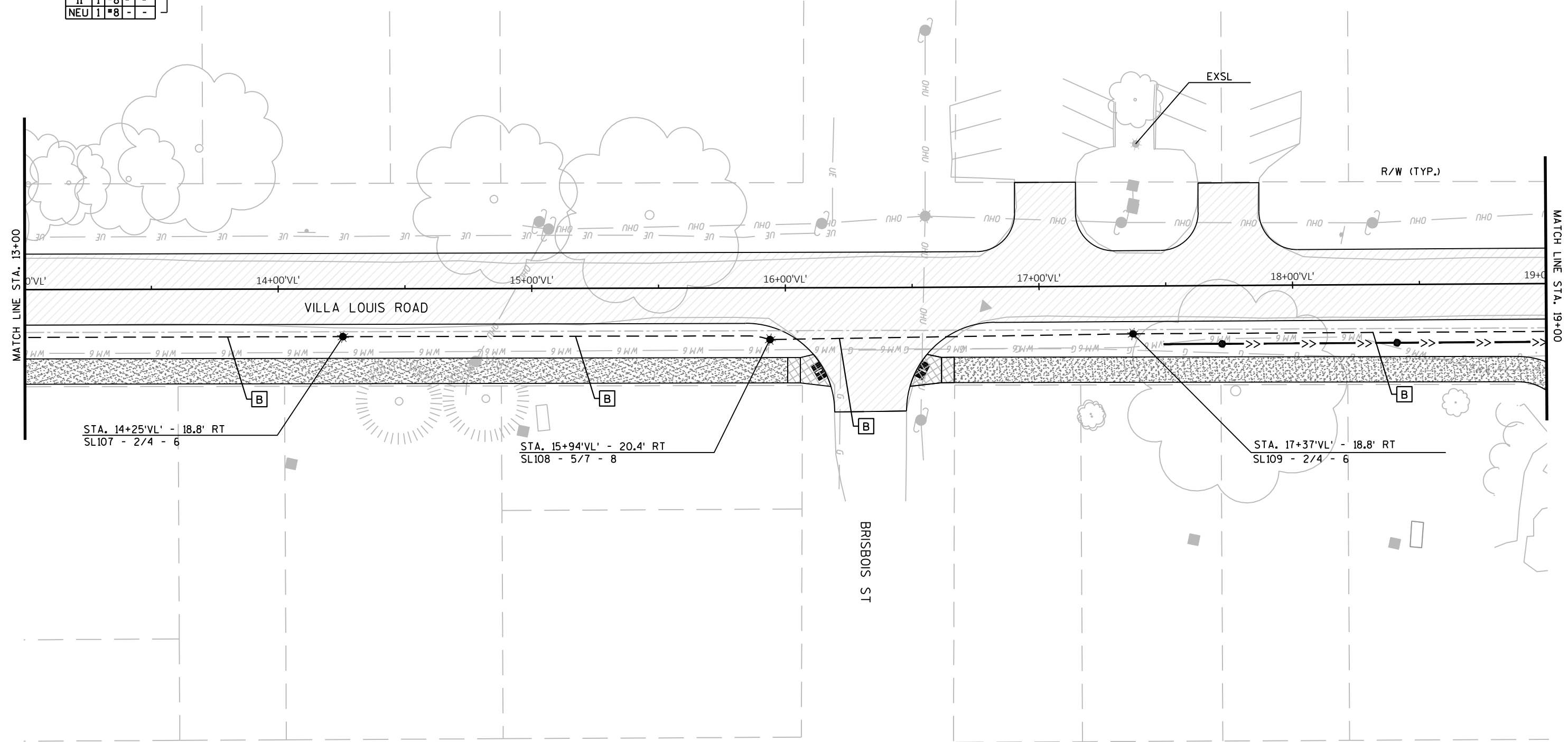
**D** =

CB100	1	2"
2/4	2	#8 1 #6
5/7	2	#8 - -
6	1	#6 - -
8	1	#6 - -
NEU	1	#6 - -

240V LIGHTING  
120V RECEPTACLES

CONSTRUCTION NOTES:

1) INSTALL SUBMERSIBLE FUSES AND SPLICE BLOCKS AT ALL STREET LIGHTS TO PREVENT WATER DAMAGE FROM FLOODING.



CB100	1	2"		
1/3	2	#8	1	#6
9	1	#6	-	-
NEU	1	#6	-	-

**A** = 240V LIGHTING  
120V RECEPTACLES

CB100	1	2"		
2/4	2	#8	1	#6
5/7	2	#8	-	-
6	1	#6	-	-
8	1	#6	-	-
NEU	1	#6	-	-
10	1	#8	-	-
NEU	1	#8	-	-
11	1	#8	-	-
NEU	1	#8	-	-

**B** = 240V LIGHTING  
120V RECEPTACLES  
120V CAMERAS

CB100	1	2"		
2/4	2	#8	1	#6
5/7	2	#8	-	-
6	1	#6	-	-
8	1	#6	-	-
NEU	1	#6	-	-
10	1	#8	-	-
NEU	1	#8	-	-

**C** = 240V LIGHTING  
120V RECEPTACLES  
120V CAMERA

CB100	1	2"		
2/4	2	#8	1	#6
5/7	2	#8	-	-
6	1	#6	-	-
8	1	#6	-	-
NEU	1	#6	-	-

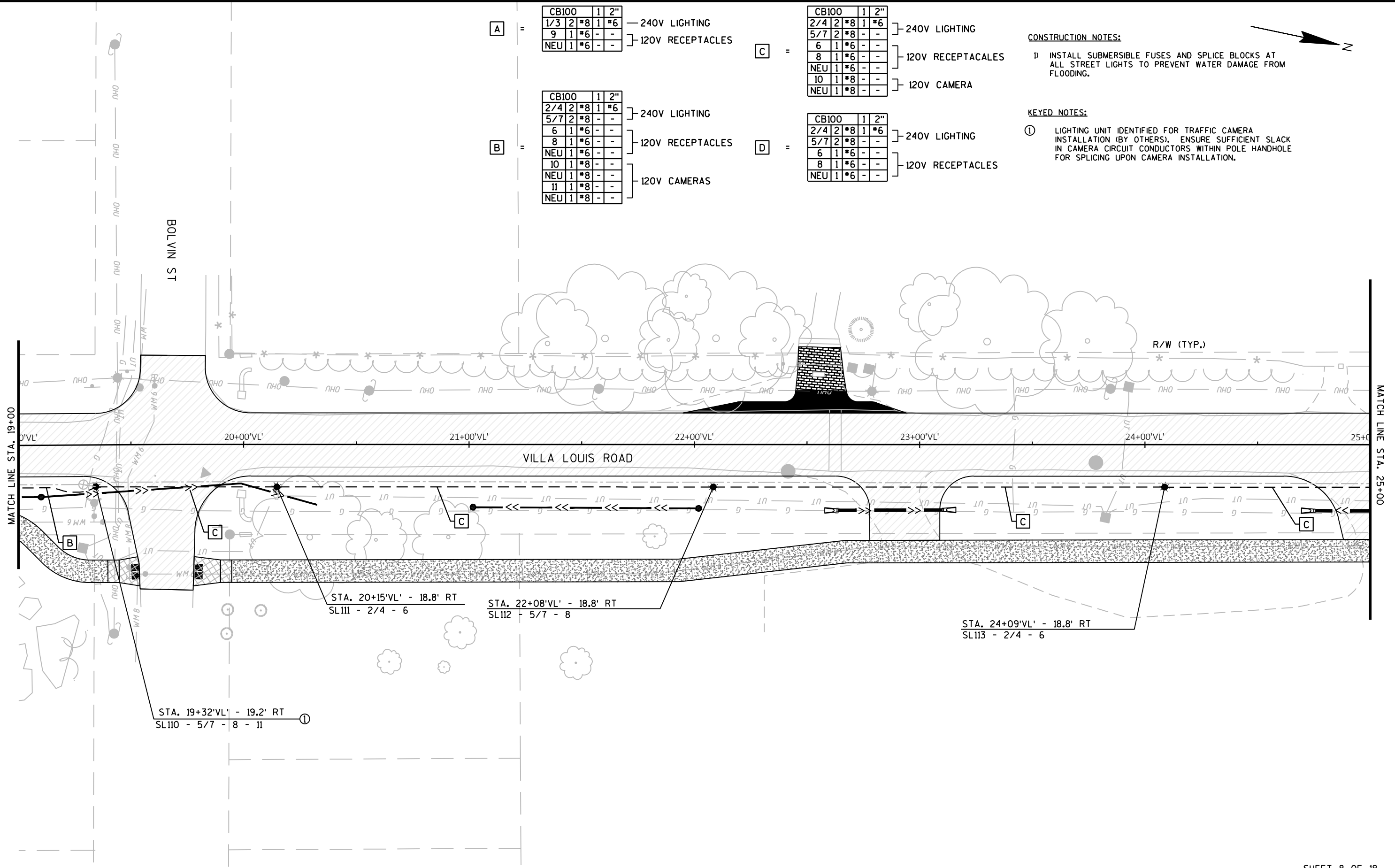
**D** = 240V LIGHTING  
120V RECEPTACLES

CONSTRUCTION NOTES:

1) INSTALL SUBMERSIBLE FUSES AND SPLICE BLOCKS AT ALL STREET LIGHTS TO PREVENT WATER DAMAGE FROM FLOODING.

KEYED NOTES:

① LIGHTING UNIT IDENTIFIED FOR TRAFFIC CAMERA INSTALLATION (BY OTHERS). ENSURE SUFFICIENT SLACK IN CAMERA CIRCUIT CONDUCTORS WITHIN POLE HANDHOLE FOR SPLICING UPON CAMERA INSTALLATION.



STA. 19+32'VL' - 19.2' RT  
SL110 - 5/7 - 8 - 11

STA. 20+15'VL' - 18.8' RT  
SL111 - 2/4 - 6

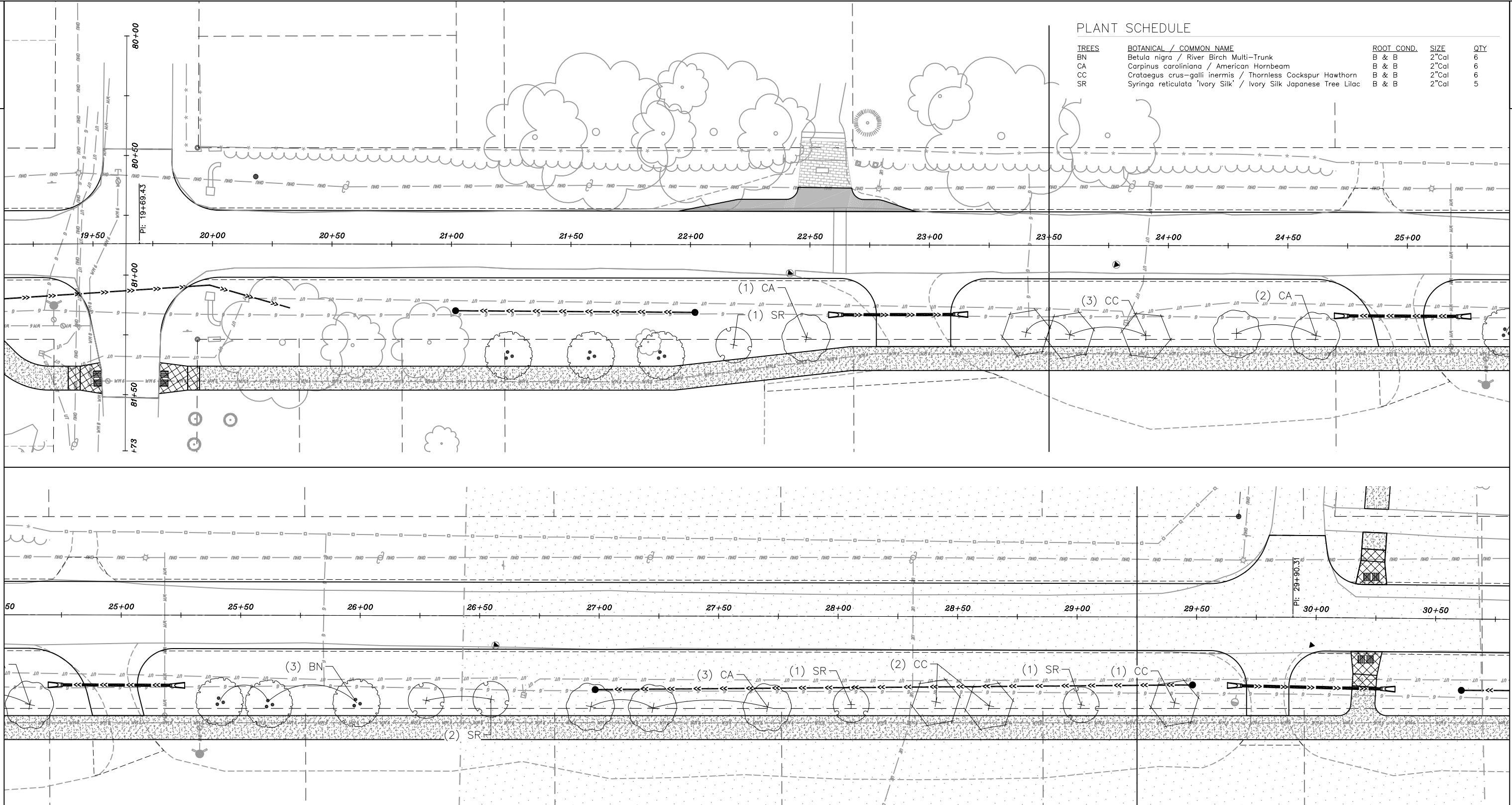
STA. 22+08'VL' - 18.8' RT  
SL112 - 5/7 - 8

STA. 24+09'VL' - 18.8' RT  
SL113 - 2/4 - 6



PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	ROOT COND.	SIZE	QTY
BN	Betula nigra / River Birch Multi-Trunk	B & B	2"Cal	6
CA	Corpinus caroliniana / American Hornbeam	B & B	2"Cal	6
CC	Crataegus crus-galli inermis / Thornless Cockspur Hawthorn	B & B	2"Cal	6
SR	Syringa reticulata 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	B & B	2"Cal	5



- PLANT MATERIAL NOTES:**
1. ALL PLANTINGS SHALL CONFORM TO QUALITY REQUIREMENTS AS PER ANSI Z60.1.
  2. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY AND SIZE SPECIFIED, NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF THE PROJECT SITE.
  3. CONTACT LANDSCAPE ARCHITECT, IN WRITING, TO REQUEST ANY PLANT MATERIAL SUBSTITUTIONS DUE TO AVAILABILITY ISSUES.
  4. ALL PLANTS SHALL BE GUARANTEED TO BE IN HEALTHY AND FLOURISHING CONDITION DURING THE GROWING SEASON FOLLOWING INSTALLATION. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM THE TIME OF INSTALLATION.

- LANDSCAPE MATERIAL NOTES:**
1. CONTRACTOR SHALL PROVIDE A SUITABLE AMENDED TOPSOIL BLEND FOR ALL PLANTING AREAS WHERE SOIL CONDITIONS ARE UNSUITABLE FOR PLANT GROWTH. TOPSOIL SHALL CONFORM TO QUALITY REQUIREMENTS AS PER SECTION 625.2(1) OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION." PROVIDE A MINIMUM OF 18" OF TOPSOIL IN ALL PLANTING AREAS AND 6" OF TOPSOIL IN AREAS TO BE SEED/SODDED.
  2. ALL TREES AND/OR SHRUBS PLANTED IN LAWN AREAS TO BE INSTALLED WITH A 5' DIAMETER MULCH RING AND SHOVEL CUT EDGE. MULCH WITH UNDYED SHREDDED HARDWOOD BARK MULCH TO 3" DEPTH MIN. A PRE-EMERGENT GRANULAR HERBICIDE WEED-PREVENTER SHOULD BE MIXED WITH MULCH AS WELL AS TOPICALLY APPLIED TO TREE RING.

Estimate Of Quantities

5997-00-41

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	18.000	18.000
0004	205.0100	Excavation Common	CY	7,650.000	7,650.000
0006	213.0100	Finishing Roadway (project) 01. 5997-00-41	EACH	1.000	1.000
0008	305.0110	Base Aggregate Dense 3/4-Inch	TON	215.000	215.000
0010	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	13,370.000	13,370.000
0012	310.0115	Base Aggregate Open-Graded	CY	84.000	84.000
0014	455.0600	Tack Coat	TON	787.000	787.000
0016	460.2000	Incentive Density HMA Pavement	DOL	1,930.000	1,930.000
0018	460.6224	HMA Pavement 4 MT 58-28 S	TON	3,010.000	3,010.000
0020	465.0105	Asphaltic Surface	TON	520.000	520.000
0022	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	80.000	80.000
0024	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	6.000	6.000
0026	520.3312	Culvert Pipe Class III-A 12-Inch	LF	185.000	185.000
0028	602.0415	Concrete Sidewalk 6-Inch	SF	1,400.000	1,400.000
0030	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	192.000	192.000
0032	612.0106	Pipe Underdrain 6-Inch	LF	919.000	919.000
0034	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	89.000	89.000
0036	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5997-00-41	EACH	1.000	1.000
0038	619.1000	Mobilization	EACH	1.000	1.000
0040	624.0100	Water	MGAL	136.000	136.000
0042	625.0100	Topsoil	SY	2,000.000	2,000.000
0044	625.0500	Salvaged Topsoil	SY	10,540.000	10,540.000
0046	627.0200	Mulching	SY	3,180.000	3,180.000
0048	628.1504	Silt Fence	LF	250.000	250.000
0050	628.1520	Silt Fence Maintenance	LF	250.000	250.000
0052	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0054	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0056	628.2002	Erosion Mat Class I Type A	SY	8,360.000	8,360.000
0058	628.7005	Inlet Protection Type A	EACH	12.000	12.000
0060	628.7560	Tracking Pads	EACH	1.000	1.000
0062	629.0210	Fertilizer Type B	CWT	10.000	10.000
0064	630.0140	Seeding Mixture No. 40	LB	100.000	100.000
0066	632.0101	Trees (species) (size) (root) 01. Betula nigro / River Birch Multi-Trunk, B&B, 2-Inch, BN	EACH	6.000	6.000
0068	632.0101	Trees (species) (size) (root) 02. Carpinus caroliniana / American Hornbeam, B&B, 2-Inch, CA	EACH	6.000	6.000
0070	632.0101	Trees (species) (size) (root) 03. Crataegus crus-galli inermis / Thornless Cockspur Hawthorn, B&B, 2-inch, CC	EACH	6.000	6.000
0072	632.0101	Trees (species) (size) (root) 04. Syringa reticulata / Ivory Silk Japanese Tree Lilac, B&B, 2-Inch, SR	EACH	5.000	5.000
0074	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	10.000	10.000
0076	634.0810	Posts Tubular Steel 2x2-Inch X 10-FT	EACH	11.000	11.000
0078	634.0814	Posts Tubular Steel 2x2-Inch X 14-FT	EACH	7.000	7.000
0080	637.2210	Signs Type II Reflective H	SF	55.820	55.820
0082	638.2102	Moving Signs Type II	EACH	15.000	15.000
0084	638.2602	Removing Signs Type II	EACH	4.000	4.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
0088	643.0300	Traffic Control Drums	DAY	1,280.000	1,280.000
0090	643.0420	Traffic Control Barricades Type III	DAY	1,280.000	1,280.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	2,560.000	2,560.000
0094	643.0715	Traffic Control Warning Lights Type C	DAY	1,280.000	1,280.000

Estimate Of Quantities

5997-00-41

Line	Item	Item Description	Unit	Total	Qty
0096	643.0900	Traffic Control Signs	DAY	1,600.000	1,600.000
0098	643.5000	Traffic Control	EACH	1.000	1.000
0100	645.0111	Geotextile Type DF Schedule A	SY	780.000	780.000
0102	646.6105	Marking Stop Line Paint 18-Inch	LF	112.000	112.000
0104	646.7405	Marking Crosswalk Paint Transverse Line 6-Inch	LF	112.000	112.000
0106	650.4000	Construction Staking Storm Sewer	EACH	12.000	12.000
0108	650.4500	Construction Staking Subgrade	LF	3,762.000	3,762.000
0110	650.5000	Construction Staking Base	LF	3,762.000	3,762.000
0112	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
0114	650.8501	Construction Staking Electrical Installations (project) 01. 5997-00-41	EACH	1.000	1.000
0116	650.9911	Construction Staking Supplemental Control (project) 01. 5997-00-41	EACH	1.000	1.000
0118	650.9920	Construction Staking Slope Stakes	LF	3,762.000	3,762.000
0120	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	7,910.000	7,910.000
0122	652.0335	Conduit Rigid Nonmetallic Schedule 80 3-Inch	LF	60.000	60.000
0124	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	10.000	10.000
0126	653.0180	Pull Boxes Steel Communications (inch) 01. 36x42-INCH	EACH	6.000	6.000
0128	654.0105	Concrete Bases Type 5	EACH	22.000	22.000
0130	655.0610	Electrical Wire Lighting 12 AWG	LF	5,862.000	5,862.000
0132	655.0620	Electrical Wire Lighting 8 AWG	LF	20,778.000	20,778.000
0134	655.0625	Electrical Wire Lighting 6 AWG	LF	15,692.000	15,692.000
0136	690.0150	Sawing Asphalt	LF	420.000	420.000
0138	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0140	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	150.000	150.000
0142	SPV.0035	Special 01. Shredded Bark Mulch	CY	5.000	5.000
0144	SPV.0060	Special 01. Decorative Lighting Unit	EACH	22.000	22.000
0146	SPV.0060	Special 02. PVC 18" Drain Basin with Grate	EACH	12.000	12.000
0148	SPV.0060	Special 03. Adjust Water Valve Box	EACH	18.000	18.000
0150	SPV.0060	Special 04. Electrical Service Meter and Control Panel (CB100)	EACH	1.000	1.000

CLEARING

CONCRETE SIDEWALK 6-INCH

ASPHALTIC PAVEMENT ITEMS

STATION	LOCATION	201.0120 CLEARING ID
7+19.4	RT	18
PROJECT TOTAL		18

LOCATION	602.0415 CONCRETE SIDEWALK 6-INCH SF	
PROJECT	1400	
PROJECT TOTAL		1400

STATION TO STATION	LOCATION	455.0600 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCE TON
2+35.8 - 40+00	PROJECT	787	3010	520	80
PROJECT TOTAL		787	3010	520	80

REMOVING ASPHALTIC SURFACE

SAWING ASPHALT

ADJUST WATER VALVE BOX

TRAFFIC CONTROL DRUMS

STATION TO STATION	LOCATION	204.0110 ASPHALTIC SURFACE S.Y.
2+35.8 - 40+00	PROJECT	10850
PROJECT TOTAL		10850

STATION	LOCATION	690.0150 SAWING ASPHALT LF
2+35.8 - 40+00	PROJECT	420
CATEGORY 0010 TOTAL		420
PROJECT TOTAL		420

CATEGORY	LOCATION	SPV.0060.03 ADJUST WATER VALVE BOX EA
0020	PROJECT	18
TOTAL		18

STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS DAY
2+35.8 - 40+00	PROJECT	1280
CATEGORY 0010 TOTAL		1280
PROJECT TOTAL		1280

COMMON EXCAVATION

MARKING STOP LINE PAINT 18-INCH

ADJUST WATER VALVE BOX

TRAFFIC CONTROL BARRICADES TYPE III

STATION TO STATION	LOCATION	205.0100 COMMON EXCAVATION C.Y.
2+35.8 - 40+00	ROAD LT	7650
PROJECT TOTAL		7650

STATION	LOCATION	646.6105 MARKING STOP LINE PAINT 18- INCH LF
2+35.8 - 40+00	PROJECT	112
CATEGORY 0010 TOTAL		112
PROJECT TOTAL		112

CATEGORY	LOCATION	SPV.0060.03 ADJUST WATER VALVE BOX EA
0020	PROJECT	18
TOTAL		18

STATION	LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY
2+35.8 - 40+00	PROJECT	1280
CATEGORY 0010 TOTAL		1280
PROJECT TOTAL		1280

FINISHING ROADWAY (PROJECT)

MARKING LINE PAINT 6-INCH

ADJUST WATER VALVE BOX

TRAFFIC CONTROL WARNING LIGHTS TYPE A

STATION TO STATION	LOCATION	213.01 FINISHING ROADWAY EA
2+35.8 - 40+00	PROJECT	1
PROJECT TOTAL		1

STATION	LOCATION	646.7405 Crosswalk Paint Transverse Line 6-Inch White LF
2+35.8 - 40+00	PROJECT	112
CATEGORY 0010 TOTAL		112
PROJECT TOTAL		112

CATEGORY	LOCATION	SPV.0060.03 ADJUST WATER VALVE BOX EA
0020	PROJECT	18
TOTAL		18

STATION	LOCATION	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY
2+35.8 - 40+00	PROJECT	2560
CATEGORY 0010 TOTAL		2560
PROJECT TOTAL		2560

CURB RAMP DETECTABLE WARNING FIELD YELLOW

TRACKING PAD

ADJUST WATER VALVE BOX

TRAFFIC CONTROL WARNING LIGHTS TYPE C

STATION	LOCATION	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
2+35.8 - 40+00	PROJECT	192
PROJECT TOTAL		192

STATION	LOCATION	628.7560 TACKING PAD EA
2+35.8 - 40+00	PROJECT	1
CATEGORY 0010 TOTAL		1
PROJECT TOTAL		1

CATEGORY	LOCATION	SPV.0060.03 ADJUST WATER VALVE BOX EA
0020	PROJECT	18
TOTAL		18

STATION	LOCATION	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY
2+35.8 - 40+00	PROJECT	1280
CATEGORY 0010 TOTAL		1280
PROJECT TOTAL		1280

MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT)

FIELD OFFICE TYPE B

ADJUST WATER VALVE BOX

TRAFFIC CONTROL SIGNS

STATION	LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) EACH
2+35.8 - 40+00	PROJECT	1
CATEGORY 0010 TOTAL		1
PROJECT TOTAL		1

STATION	LOCATION	642.5001 FIELD OFFICE TYPE B EACH
2+35.8 - 40+00	PROJECT	1
CATEGORY 0010 TOTAL		1
PROJECT TOTAL		1

CATEGORY	LOCATION	SPV.0060.03 ADJUST WATER VALVE BOX EA
0020	PROJECT	18
TOTAL		18

STATION	LOCATION	643.0900 TRAFFIC CONTROL SIGNS DAY
2+35.8 - 40+00	PROJECT	1600
CATEGORY 0010 TOTAL		1600
PROJECT TOTAL		1600

MOBILIZATION

BASE COURSE ITEMS

TRAFFIC CONTROL (PROJECT)

STATION	LOCATION	619.1000 MOBILIZATION LS
2+35.8 - 40+00	PROJECT	1
CATEGORY 0010 TOTAL		1
PROJECT TOTAL		1

STATION TO STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0130 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL
2+35.8 - 40+00	PROJECT	13370	-	134
2+35.8 - 40+00	PROJECT	-	215	2
PROJECT TOTAL		13370	215	136

STATION	LOCATION	643.5000 TRAFFIC CONTROL (PROJECT) ES
2+35.8 - 40+00	PROJECT	1
CATEGORY 0010 TOTAL		1
PROJECT TOTAL		1

CONSTRUCTION STAKING

GEOTEXTILE FABRIC TYPE DF SCHEDULE A

STATION TO STATION	LOCATION	650.4000 CONSTRUCTION STAKING STORM SEWER EA	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6000 CONSTRUCTION STAKING PIPE CULVERT EA	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) EA	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.8501 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) EA
2+35.8 - 40+00	PROJECT	12	3762	3762	6	1	3762	1
PROJECT TOTAL		12	3762	3762	6	1	3762	1

STATION	LOCATION	645.0112 GEOTEXTILE FABRIC TYPE DF SCHEDULE A SY
2+35.8 - 40+00	PROJECT	780
CATEGORY 0010 TOTAL		780
PROJECT TOTAL		780

PROJECT NO: 5997-00-41

HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

MISCELLANEOUS QUANTITIES

SHEET

E

**STORM SEWER SUMMARY**

STRUCTURE NUMBER	STRUCTURE TYPE	CENTER OF STRUCTURE		TO STRUCTURE	GRATE, RIM ELEVATION	TOP OF STRUCTURE ELEVATION	DEPTH OF INVERT (FT)	INLET PIPE ELEVATION	DISCHARGE PIPE ELEVATION	SLOPE	STORMSEWER PIPE		BASE AGGREGATE OPEN-GRADED 310.011 CY	BASE 520.1012 12-INCH APRON ENDWALL EA	SPV.0060.02 PVC 18" DRAIN BASIN w/ GRATE EA	628.7050 INLET PROTECTION TYPE A EA	520.3312 CULVERT PIPE CLASS III-A 12-INCH EA
		STATION	LOCATION								PERFORATED 6-INCH LF	UNPERFORATED 6-INCH LF					
CATEGORY 0010																	
S6	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	5+39.2	21.4'RT	ELBOW (DAYLIGHT)	622.81	622.81	0.99	621.82	621.82	0.00%	100.00	-	-	-	1	1	-
S5	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	6+00.6	21.2'RT	FIELD INLET (S6)	622.84	622.84	1.02	621.82	621.82	0.00%	61.00	-	-	-	1	1	-
S4	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	6+63.0	21.1'RT	FIELD INLET (S5)	622.88	622.88	1.06	621.82	621.82	0.00%	62.00	-	-	-	1	1	-
-	-	-	-	FIELD INLET (S4)	-	-	-	-	-	-	50.00	-	-	-	-	-	-
-	-	-	-	FIELD INLET (S12)	-	-	-	-	-	-	23.00	-	-	-	-	-	-
S12	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	17+72.1	23.0'RT	FIELD INLET (S11)	622.66	622.66	1.16	621.50	621.50	0.00%	69.00	-	-	-	1	1	-
S11	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	18+41.1	23.0'RT	FIELD INLET (S9)	622.87	622.87	1.37	621.50	621.50	0.00%	69.00	-	-	-	1	1	-
S9	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	19+10.0	23.0'RT	FIELD INLET (DAYLIGHT)	621.49	621.49	1.50	619.99	619.99	0.00%	35.00	89.00	-	-	1	1	-
S19	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	21+01.8	27.8'RT	-	643.27	643.27	6.93	636.34	635.00	-	-	-	-	-	1	1	-
S20	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	22+01.9	28.3'RT	FIELD INLET(S19)	621.67	621.67	1.68	-	619.99	0.00%	100.00	-	-	-	1	1	-
S13	ENDWALL	22+57.9	29.2'RT	ENDWALL(S14)	-	-	622.00	-	622.00	0.34%	-	-	-	1	-	-	58
S14	ENDWALL	23+16.1	29.0'RT	-	-	-	621.80	-	640.83	-	-	-	-	1	-	-	-
S15	ENDWALL	24+69.5	29.3'RT	-	-	-	622.00	-	622.00	-	-	-	-	1	-	-	-
S16	ENDWALL	25+26.6	29.4'RT	ENDWALL(S15)	-	-	622.40	-	622.40	0.70%	-	-	-	1	-	-	57
S21	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	26+98.4	30.8'RT	-	622.91	622.91	1.79	621.12	-	-	-	-	-	-	1	1	-
S22	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	29+48.4	28.4'RT	FIELD INLET(S21)	622.62	622.62	1.50	-	621.12	0.00%	250.00	-	-	-	1	1	-
S18	ENDWALL	29+63.0	28.6'RT	ENDWALL(S17)	-	-	622.00	-	-	-	-	-	-	1	-	-	-
S17	ENDWALL	30+33.3	29.6'RT	-	-	-	621.90	-	622.00	0.14%	-	-	-	1	-	-	70
S23	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	30+61.0	29.8'RT	-	621.68	621.68	1.74	619.94	-	-	-	-	-	-	1	1	-
S24	PVC 18" DRAIN BASIN WITH GRATE (SPV.0060.02)	31+61.0	29.2'RT	FIELD INLET(S23)	621.45	621.45	1.51	-	619.94	0.00%	100.00	-	-	-	1	1	-
CATEGORY 0010 TOTAL					-	-	-	-	-	-	919	89	84	6	12	12	185
PROJECT TOTAL					-	-	-	-	-	-	919	89	84	6	12	12	185

**MOBILIZATION EROSION CONTROL**

		628.1905 MOBILIZATION EROSION CONTROL
STATION	LOCATION	EA
2+35.8 - 40+00	PROJECT	3
CATEGORY 0010 TOTAL		3
PROJECT TOTAL		3

**MOBILIZATION EMERGENCY EROSION CONTROL**

		628.1910 MOBILIZATION EMERGENCY EROSION CONTROL
STATION	LOCATION	EA
2+35.8 - 40+00	PROJECT	3
CATEGORY 0010 TOTAL		3
PROJECT TOTAL		3

**EROSION MAT CLASS I TYPE A**

		628.2002 EROSION MAT URBAN CLASS TYPE I
STATION	LOCATION	SY
2+35.8 - 40+00	PROJECT	8360
CATEGORY 0010 TOTAL		8360
PROJECT TOTAL		8360

**SILT FENCE MAINTENANCE**

		628.1520 SILT FENCE MAINTENANCE
STATION	LOCATION	LF
2+35.8 - 40+00	PROJECT	250
CATEGORY 0010 TOTAL		250
PROJECT TOTAL		250

**SILT FENCE**

		628.1504 SILT FENCE
STATION	LOCATION	LF
2+35.8 - 40+00	PROJECT	250
CATEGORY 0010 TOTAL		250
PROJECT TOTAL		250

**MULCHING**

		627.0200 MULCHING	SPV.0035.01 SHREDDED BARK MULCH
STATION	LOCATION	SY	CY
2+35.8 - 40+00	PROJECT	3180	5
CATEGORY 0010 TOTAL		3180	0
CATEGORY 0020 TOTAL		0	5
PROJECT TOTAL		3180	5

**FERTILZER TYPE B**

		629.0210 FERTILZER TYPE B
STATION	LOCATION	CWT
2+35.8 - 40+00	PROJECT	10
CATEGORY 0010 TOTAL		10
PROJECT TOTAL		10

**SEEDING MIXTURE NO. 40**

		630.0140 SEEDING MIXTURE NO. 40
STATION	LOCATION	LB
2+35.8 - 40+00	PROJECT	100
CATEGORY 0010 TOTAL		100
PROJECT TOTAL		100

**TREES**

		632.0101 TREES (SPECIES, ROOT, SIZE) 01. BETULA NIGRO/RIVER BIRCH MULTI-TRUNK, BN	632.0101 TREES (SPECIES, ROOT, SIZE) 02. CARPINUS CAROLINIANA/AMERICAN HORNVEAM, CA	632.0101 TREES (SPECIES, ROOT, SIZE) 03. CRATAEGUS CRUS-GALLI INERMIS/THORNLESS COCKSPUR HAWTHORN, CC	632.0101 TREES (SPECIES, ROOT, SIZE) 04. SYRINGA RETICULATA 'IVORY SILK'/IVORY SILK JAPANESE TREE LILAC, SR
STATION	LOCATION	B&B, 2-INCH EACH	B&B, 2-INCH EACH	B&B, 2-INCH EACH	B&B, 2-INCH EACH
21+24.1, 46.3' RT	VILLA LOUIS ROAD	1	-	-	-
21+58.5, 46.3' RT	VILLA LOUIS ROAD	1	-	-	-
21+87.9, 46.2' RT	VILLA LOUIS ROAD	1	-	-	-
22+18.2, 41.9' RT	VILLA LOUIS ROAD	-	-	-	1
22+48.7 38.7' RT	VILLA LOUIS ROAD	-	1	-	-
23+40.6, 36.5' RT	VILLA LOUIS ROAD	-	-	1	-
23+58.9, 37.5' RT	VILLA LOUIS ROAD	-	-	1	-
23+90.6, 37.7' RT	VILLA LOUIS ROAD	-	-	1	-
24+28.6, 36.7' RT	VILLA LOUIS ROAD	-	1	-	-
24+61.9, 37.6' RT	VILLA LOUIS ROAD	-	1	-	-
25+41.4, 36.0' RT	VILLA LOUIS ROAD	1	-	-	-
25+62.0, 36.9' RT	VILLA LOUIS ROAD	1	-	-	-
25+98.7, 36.5' RT	VILLA LOUIS ROAD	1	-	-	-
26+27.7, 35.5' RT	VILLA LOUIS ROAD	-	-	-	1
26+54.8, 34.9' RT	VILLA LOUIS ROAD	-	-	-	1
26+96.6, 38.0' RT	VILLA LOUIS ROAD	-	1	-	-
27+22.6, 38.4' RT	VILLA LOUIS ROAD	-	1	-	-
27+70.6, 38.0' RT	VILLA LOUIS ROAD	-	1	-	-
28+05.5, 36.9' RT	VILLA LOUIS ROAD	-	-	-	1
28+41.1, 35.7' RT	VILLA LOUIS ROAD	-	-	1	-
28+63.3, 37.3' RT	VILLA LOUIS ROAD	-	-	1	-
29+01.8, 36.8' RT	VILLA LOUIS ROAD	-	-	-	1
26+40.9, 35.9' RT	VILLA LOUIS ROAD	-	-	1	-
TOTAL		6	6	6	5

**TOPSOIL**

		625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY
STATION	LOCATION		
2+35.8 - 40+00	PROJECT	2000	10540
CATEGORY 0010 TOTAL		2000	10540
PROJECT TOTAL		2000	10540

3

3

SIGNING

634.0810 634.0814 637.2210 638.2102 638.2602  
 POSTS POSTS TUBULAR SIGNS TYPE II MOVING SIGNS REMOVING SIGNS  
 TUBULAR STEEL STEEL 2X2-INCH REFLECTIVE H TYPE II TYPE II  
 2X2-INCH 10-FT 14-FT

STATION	LOCATION	SIGN CODE	SIGN MESSAGE	SIZE	EACH	SF	EACH	EACH	REMARKS
2+48.8	RT	R1-1	STOP	18X18	1	1.86	--	--	
7+28.7	RT	R1-1	STOP	18X18	1	1.86	--	--	
7+68.5	RT	--	STOP	--	--	--	1	--	EXISTING STOP SIGN & POST
7+68.5	RT	--	N VILLA LOUIS RD & ROLTETTE ST	--	--	--	1	--	EXISTING STREET SIGN & POST
7+75.5	RT	R1-1	STOP	18X18	1	1.86	1	--	
12+07.3	RT	R1-1	STOP	18X18	1	1.86	--	--	
12+47.0	RT	--	STOP	--	--	--	1	--	EXISTING STOP SIGN & POST
12+47.0	RT	--	N VILLA LOUIS RD & FISHER ST	--	--	--	1	--	EXISTING STREET SIGN & POST
12+54.9	RT	R1-1	STOP	18X18	1	1.86	--	--	
16+04.0	RT	R1-1	STOP	18X18	1	1.86	--	--	
16+64.4	RT	R1-1	STOP	18X18	1	1.86	--	--	
19+43.5	RT	R1-1	STOP	18X18	1	1.86	--	--	
19+90.3	RT	R1-1	STOP	18X18	1	1.86	--	--	
26+58.1	LT	--	PEDESTRIAN CROSSING	--	--	--	--	1	EXISTING PEDESTRIAN CROSSING SIGN & POST
27+75.7	RT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
27+75.7	RT	W16-9P	AHEAD	24X12	--	2.00	--	--	
29+69.4	LT	--	STOP	--	--	--	1	--	EXISTING SIGN TO BE MOVED TO STA:29+71.0 LT
29+69.4	LT	--	N VILLA LOUIS RD & WATER ST	--	--	--	1	--	EXISTING SIGN TO BE MOVED TO STA:29+71.0 LT
30+14.1	RT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
30+14.1	RT	W16-7P	ARROW	24X12	--	1.00	--	--	
30+15.1	LT	R1-1	STOP	18X18	1	1.00	--	--	
30+30.2	RT	R1-1	STOP	18X18	1	1.00	--	--	
30+31.0	LT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
30+31.0	LT	W16-7P	ARROW	24X12	--	1.00	--	--	
31+22.7	RT	--	DEAD END	--	--	--	1	--	EXISTING DEAD END SIGN & POST
32+39.5	RT	--	PEDESTRIAN CROSSING	--	--	--	--	1	EXISTING PEDESTRIAN SIGN & POST
33+50.3	LT	--	STOP	--	--	--	1	--	EXISTING STOP SIGN & POST
33+50.3	LR	--	BIKE ROUTE	--	--	--	1	--	EXISTING BIKE ROUTE SIGN
33+56.1	RT	--	PEDESTRIAN CROSSING	--	--	--	--	1	EXISTING PEDESTRIAN SIGN
33+56.1	RT	--	ARROW	--	--	--	1	--	EXISTING ARROW SIGN
33+56.1	RT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
33+71.0	LT	--	PEDESTRIAN CROSSING	--	--	--	--	1	EXISTING PEDESTRIAN SIGN
33+71.0	LT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
33+71.0	LT	--	ARROW	--	--	--	1	--	EXISTING ARROW SIGN
33+71.6	RT	--	STOP	--	--	--	1	--	
33+71.6	RT	--	BIKE CROSSING	--	--	--	1	--	EXISTING BIKE CROSSING SIGN
36+48.8	LT	W11-15	BIKE & PEDESTRIAN CROSSING	30X30	--	5.18	--	--	
36+48.8	LT	W16-9P	AHEAD	24X12	--	2.00	--	--	
39+71.5	RT	--	RAILROAD CROSSING	--	--	--	1	--	EXISTING RAILROAD CROSSING SIGN & POST
PROJECT TOTAL				--	11	55.82	15	4	

3

LIGHTING CONDUIT AND WIRE

Table with columns: FROM, TO, 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF, 652.0335 SCHEDULE 80 3-INCH LF, 655.0610\* 12 AWG LF, 655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF, 655.0625 6 AWG LF, REMARKS. Includes project total row.

\* ADDITIONAL QUANTITIES FOUND ELSEWHERE

LIGHTING CONTROL

Table with columns: CABINET NUMBER, STATION, OFFSET, R/L, SPV.0060.04 ELECTRICAL SERVICE METER AND CONTROL PANEL (CB100) EACH. Includes project total row.

3

STREET LIGHTS

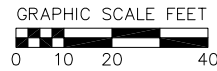
Table with columns: LIGHT NUMBER, STATION, OFFSET, R/L, 654.0105 CONCRETE BASES TYPE 5 EACH, SPV.0060.01 DECORATIVE LIGHTING UNIT EACH, 655.0610\* ELECTRICAL WIRE LIGHTING 12AWG LF. Includes project total row.

\*ADDITIONAL QUANTITIES FOUND ELSEWHERE

LIGHTING PULLBOXES

Table with columns: PULLBOX NUMBER, STATION, OFFSET, R/L, 653.0180 PULL BOXES STEEL COMMUNICATIONS 36X42-INCH EACH, 653.0164 PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH. Includes project total row.

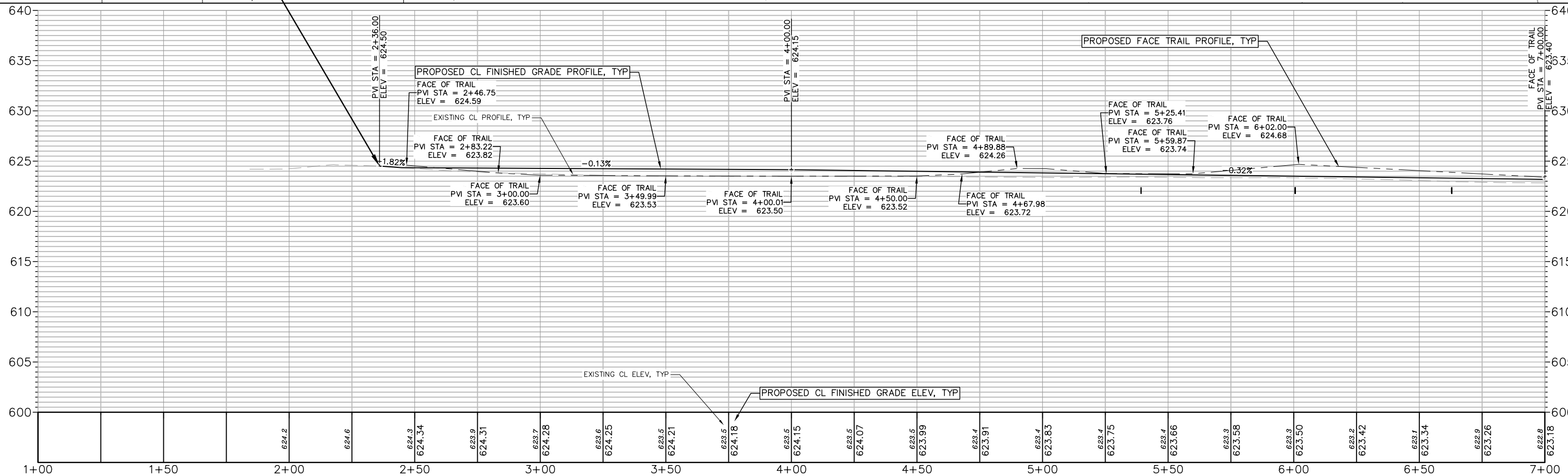
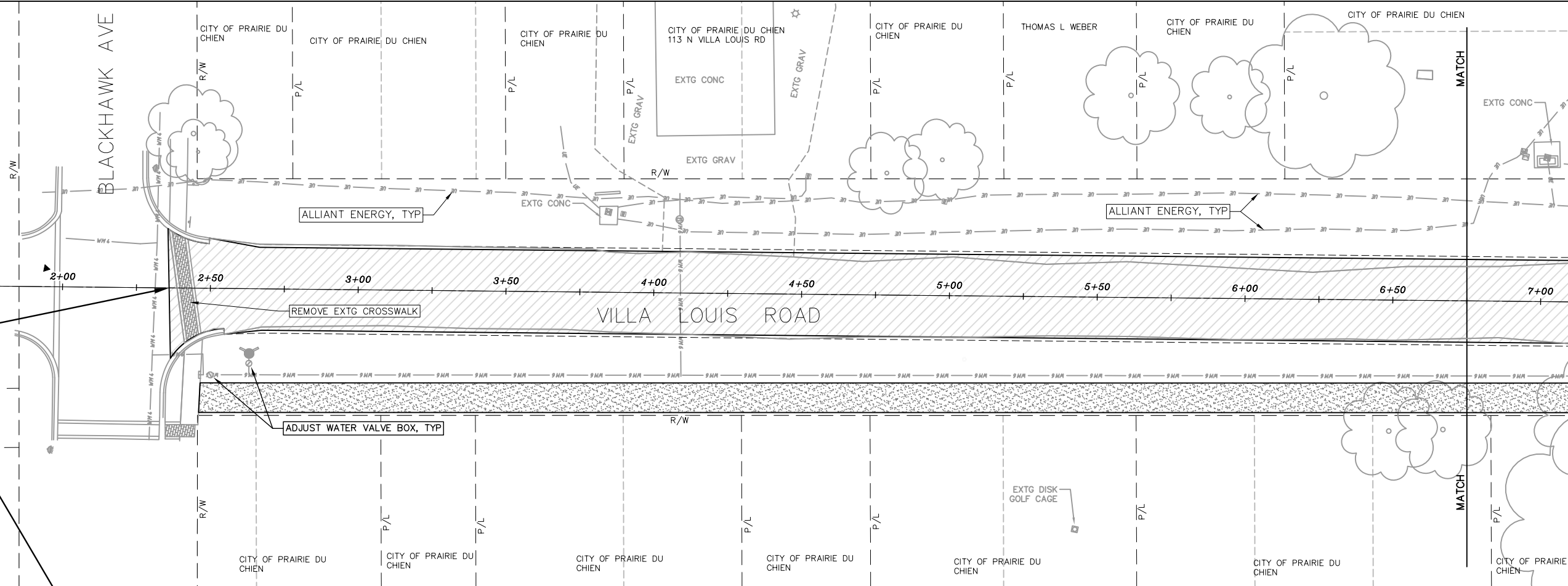




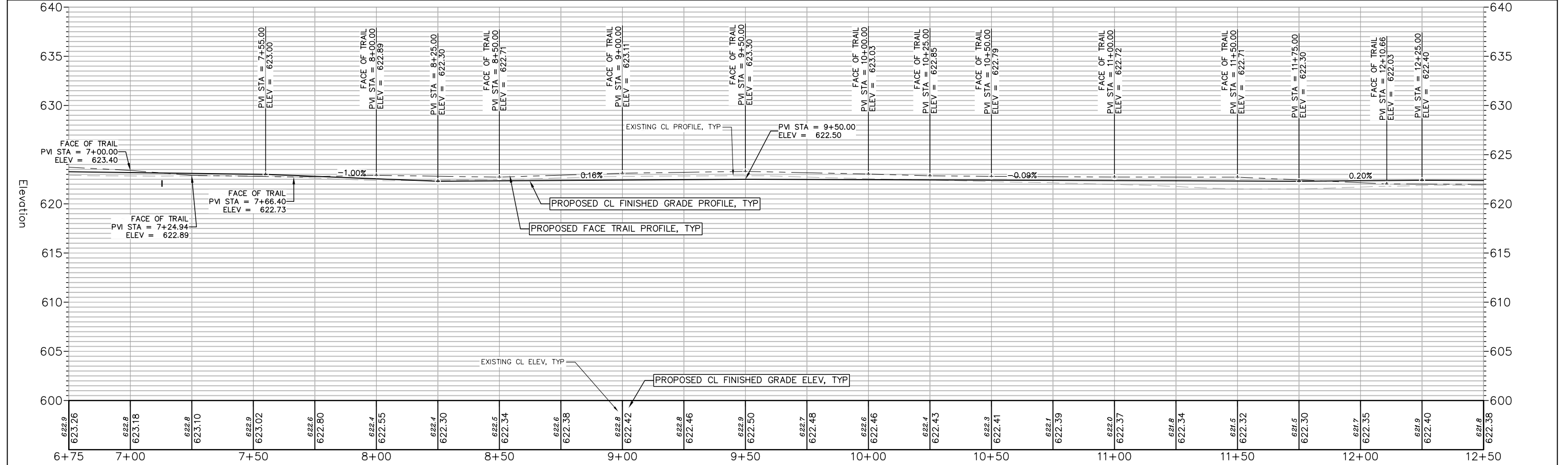
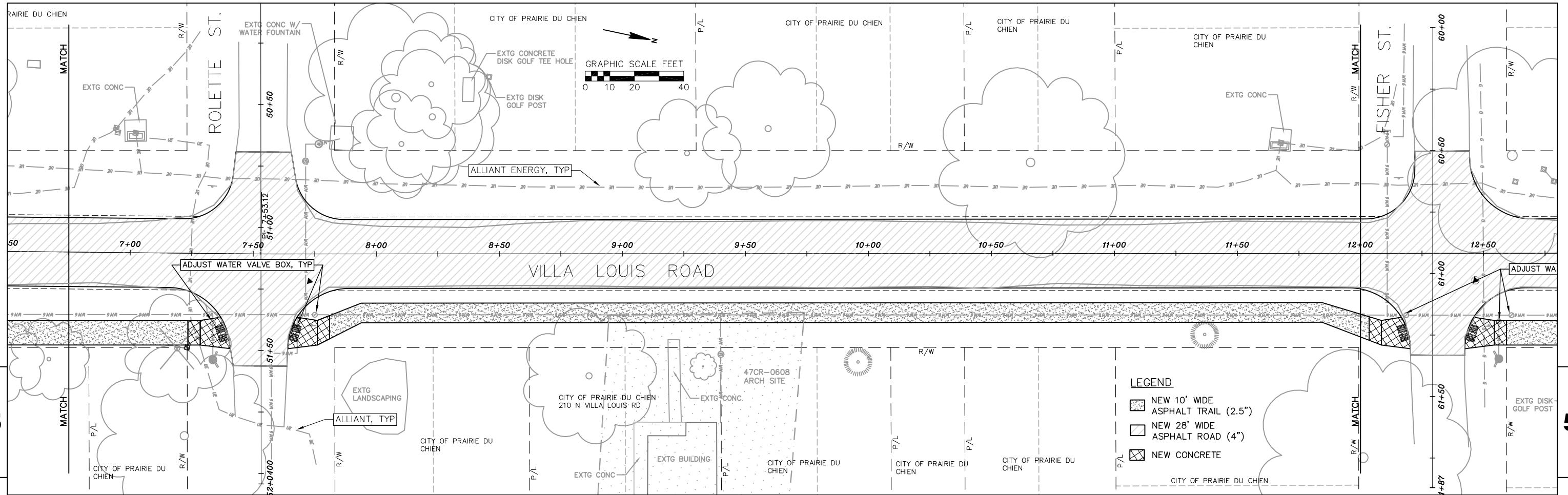
**LEGEND**

- NEW 10' WIDE ASPHALT TRAIL (2.5")
- NEW 28' WIDE ASPHALT ROAD (4")
- NEW CONCRETE

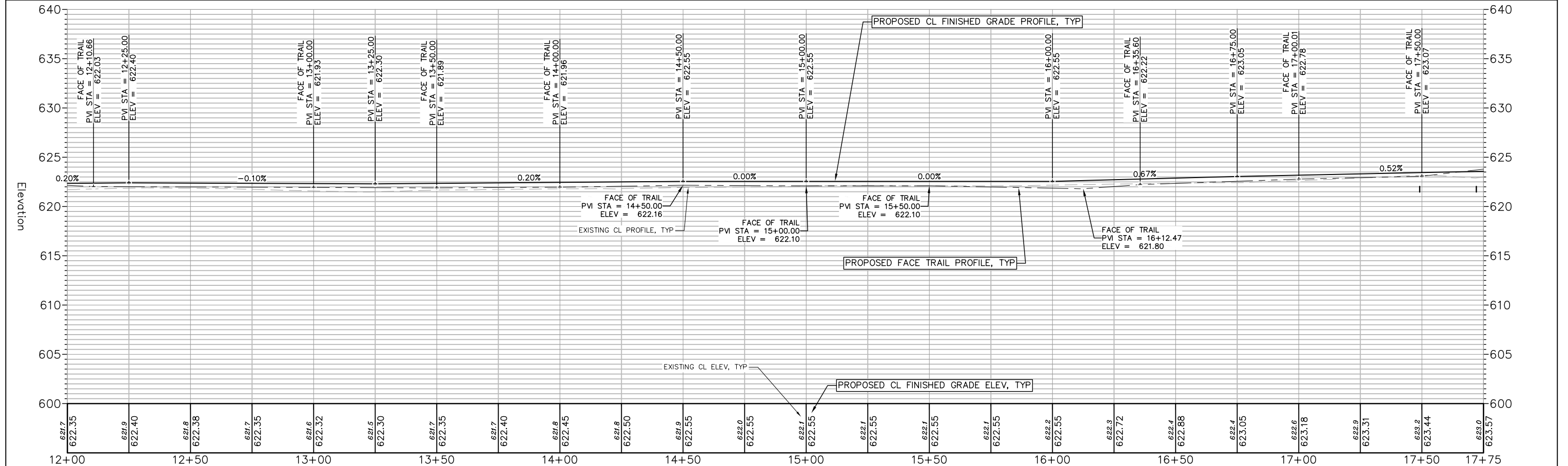
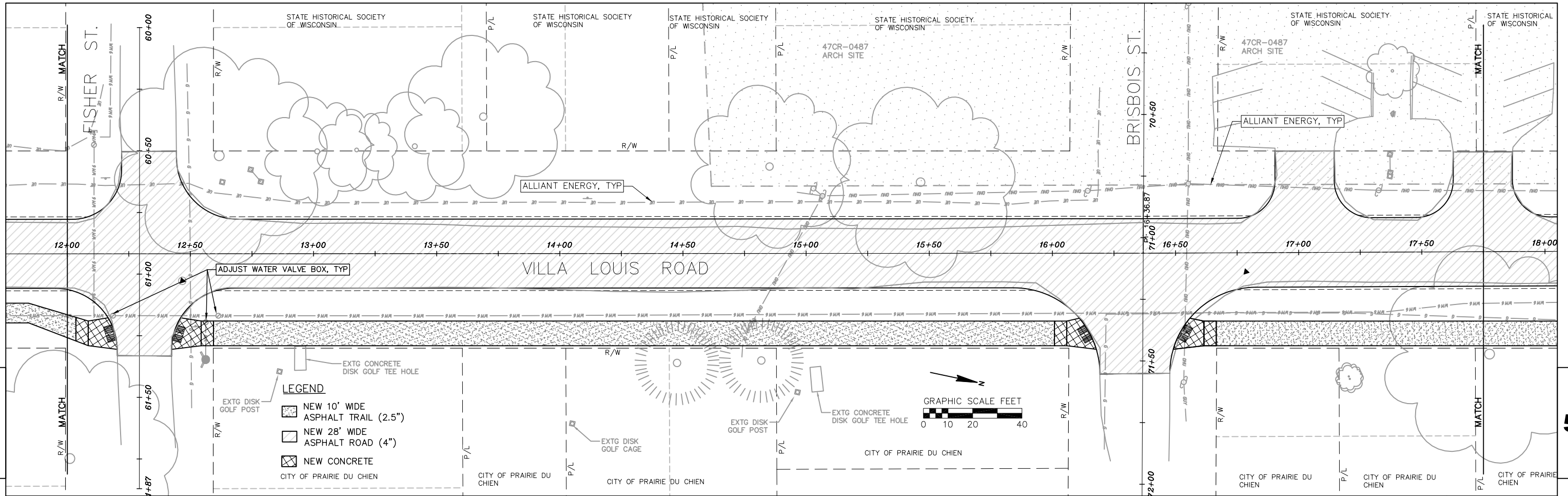
BEGIN PROJECT  
STA 2+36



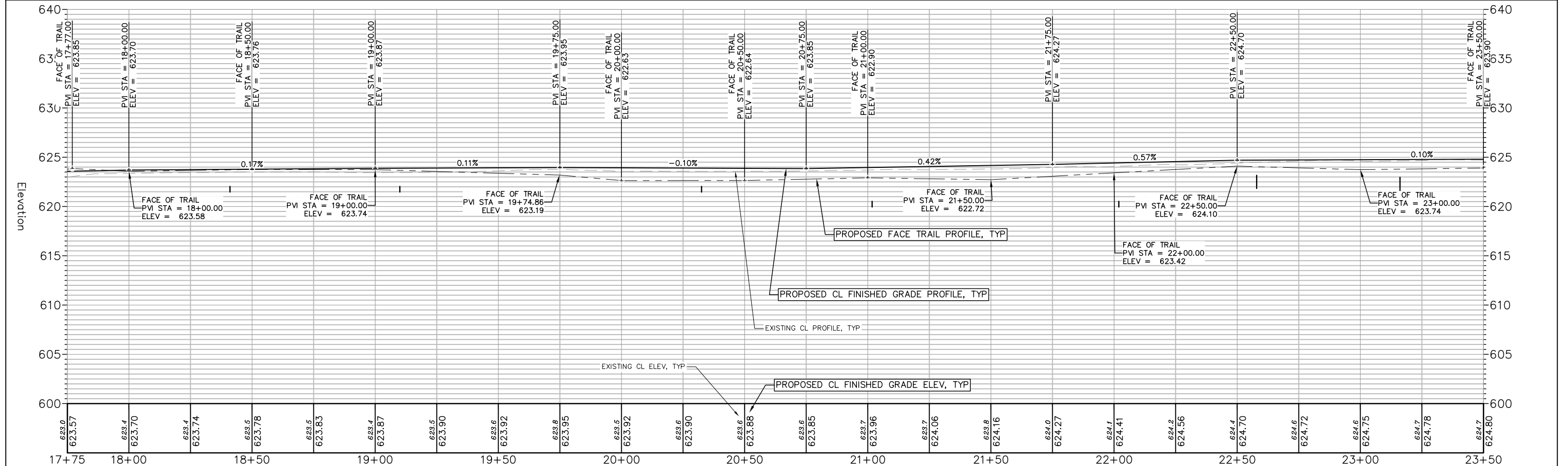
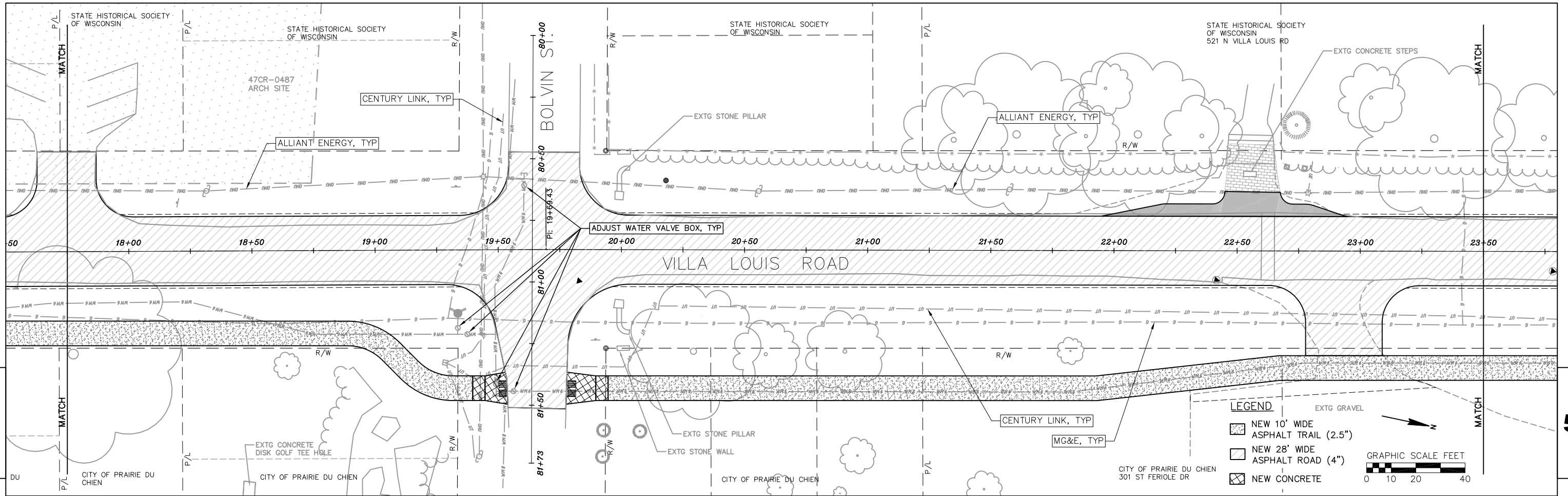
PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PLAN AND PROFILE: VILLA LOUIS ROAD      SHEET **E**



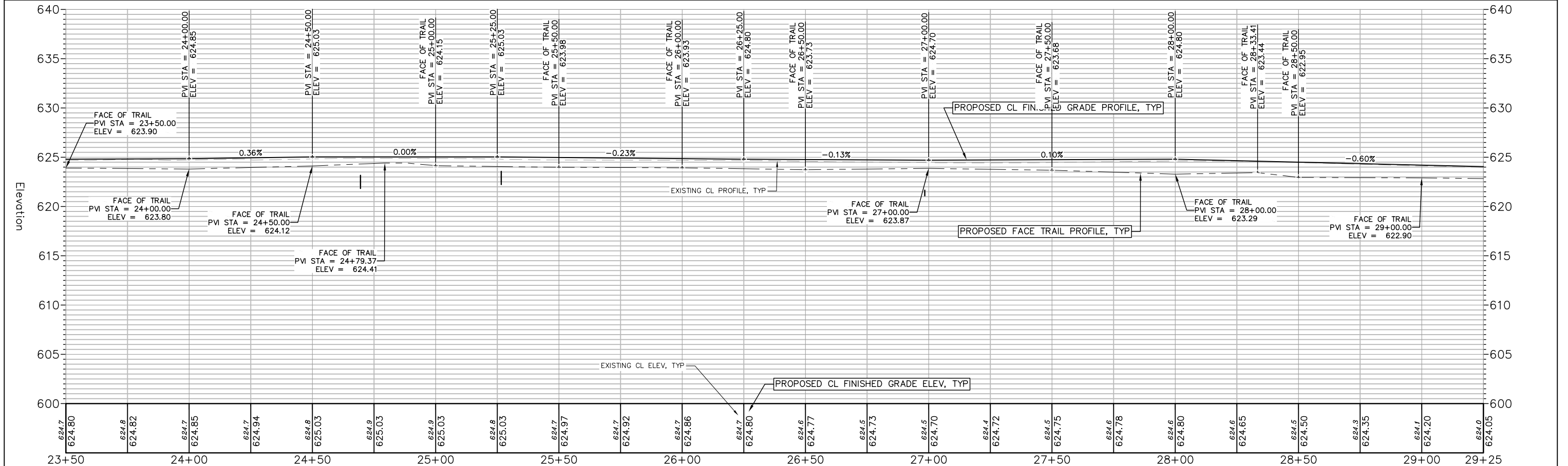
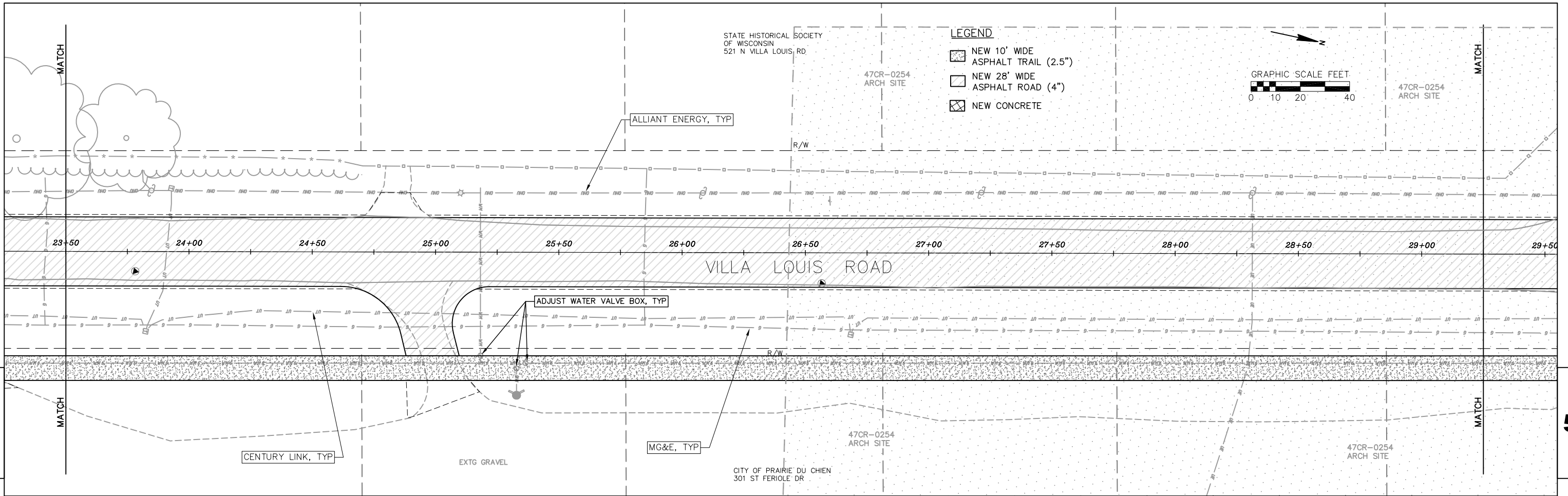
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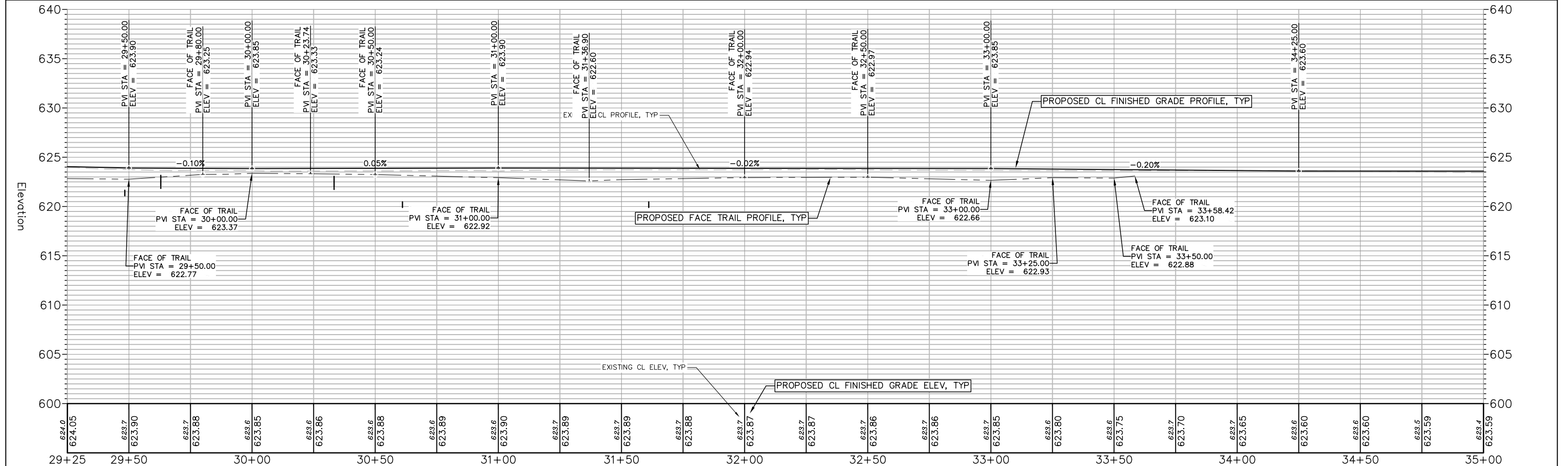
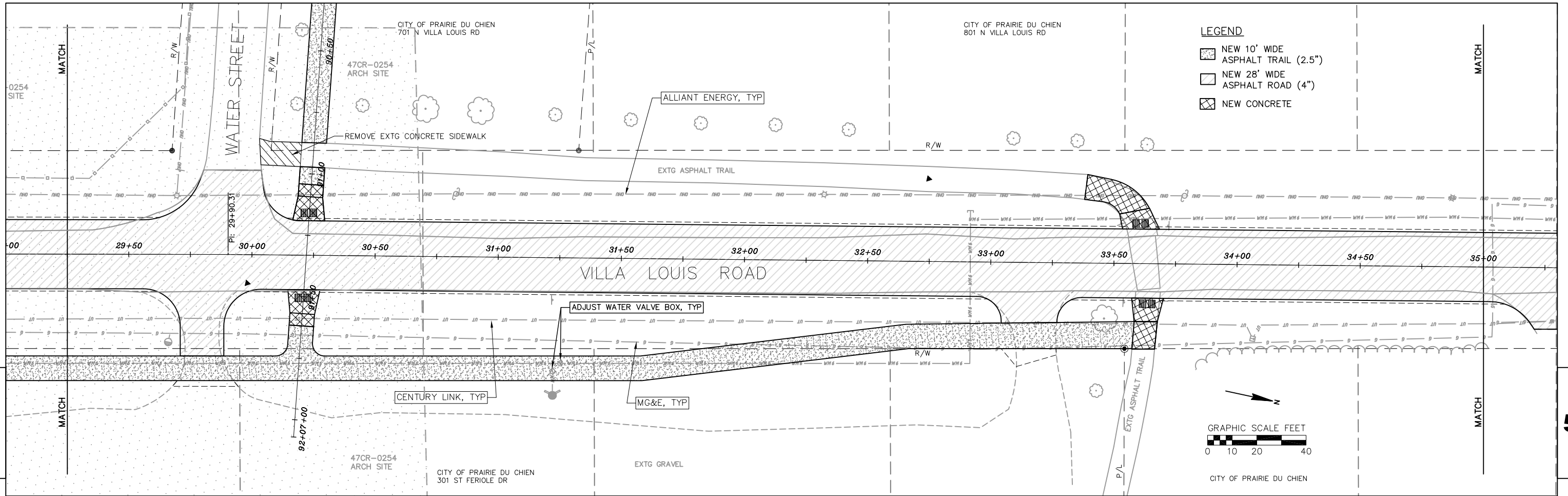
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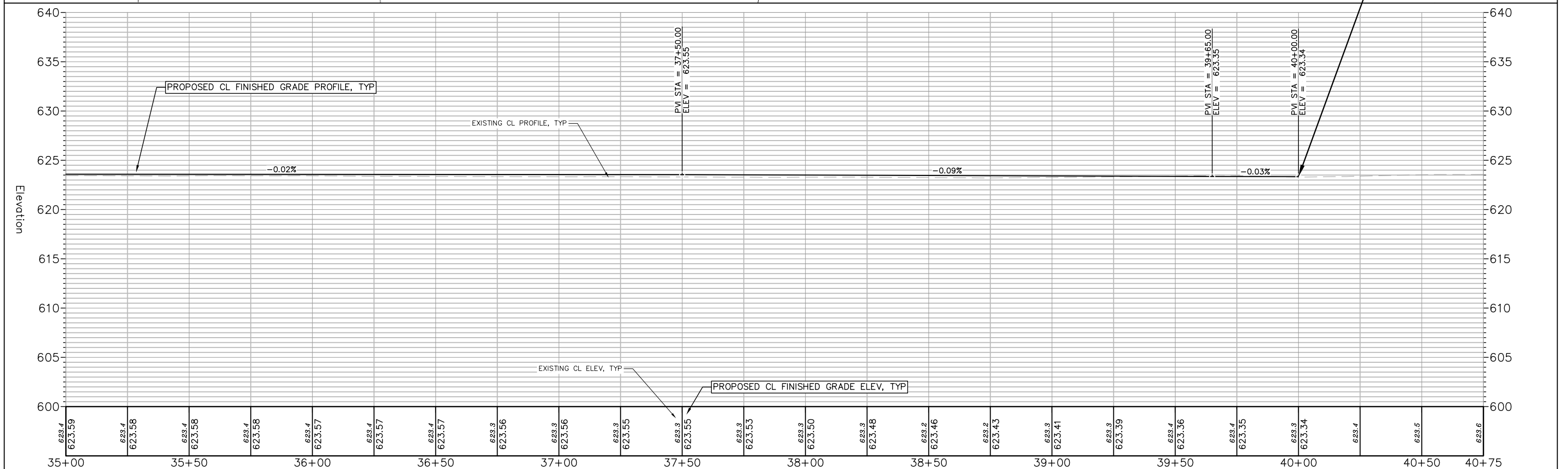
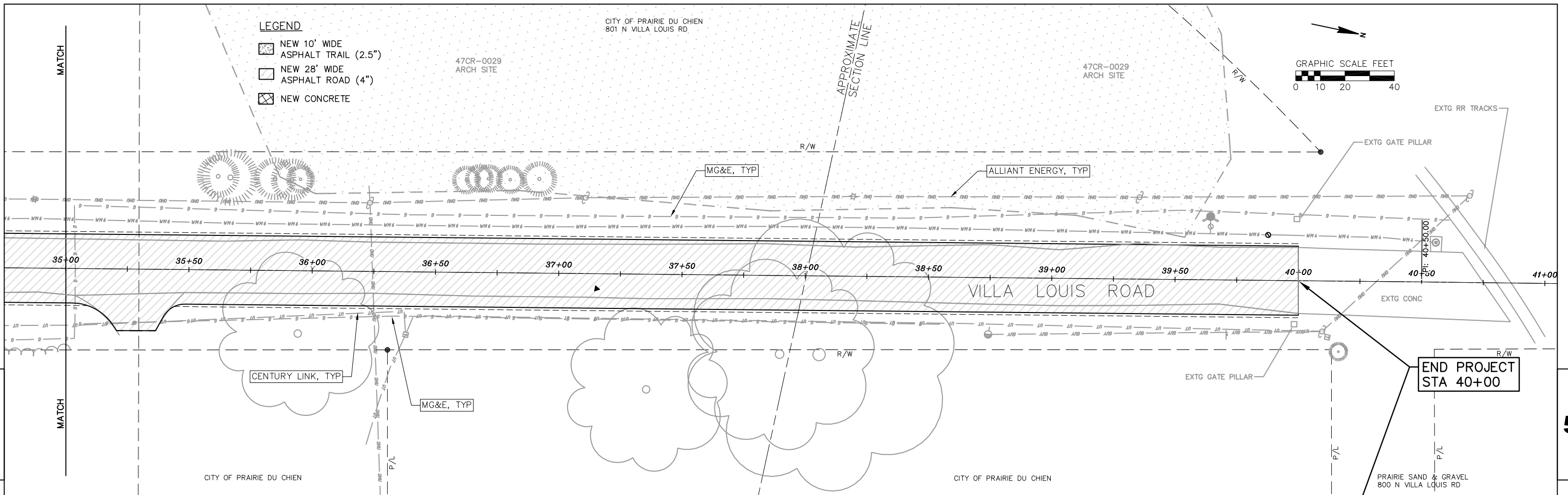
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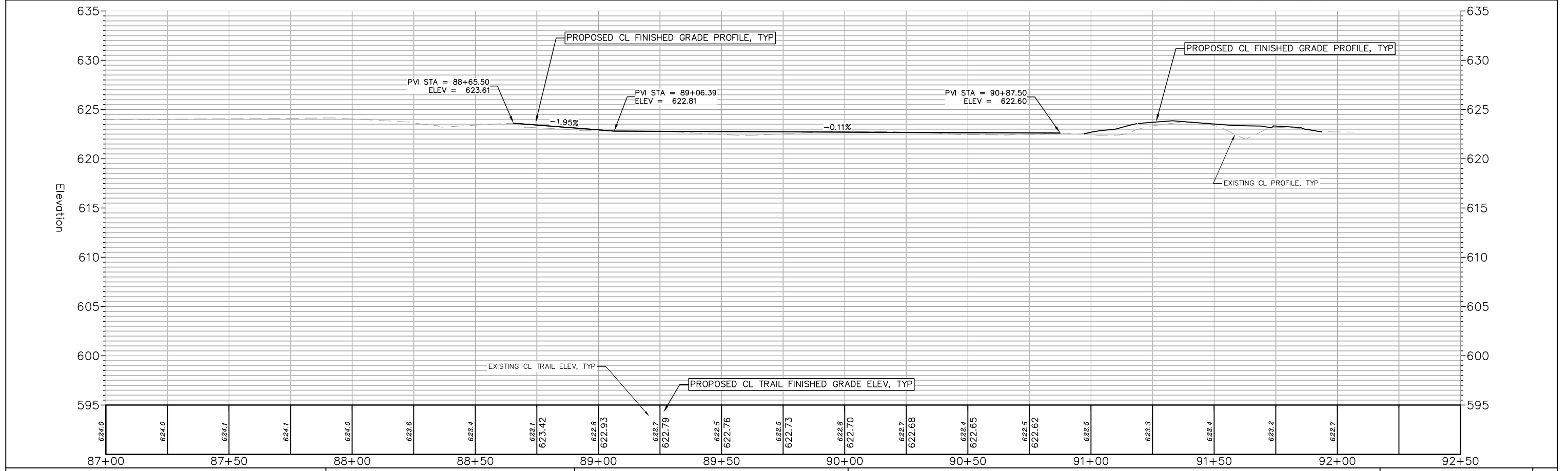
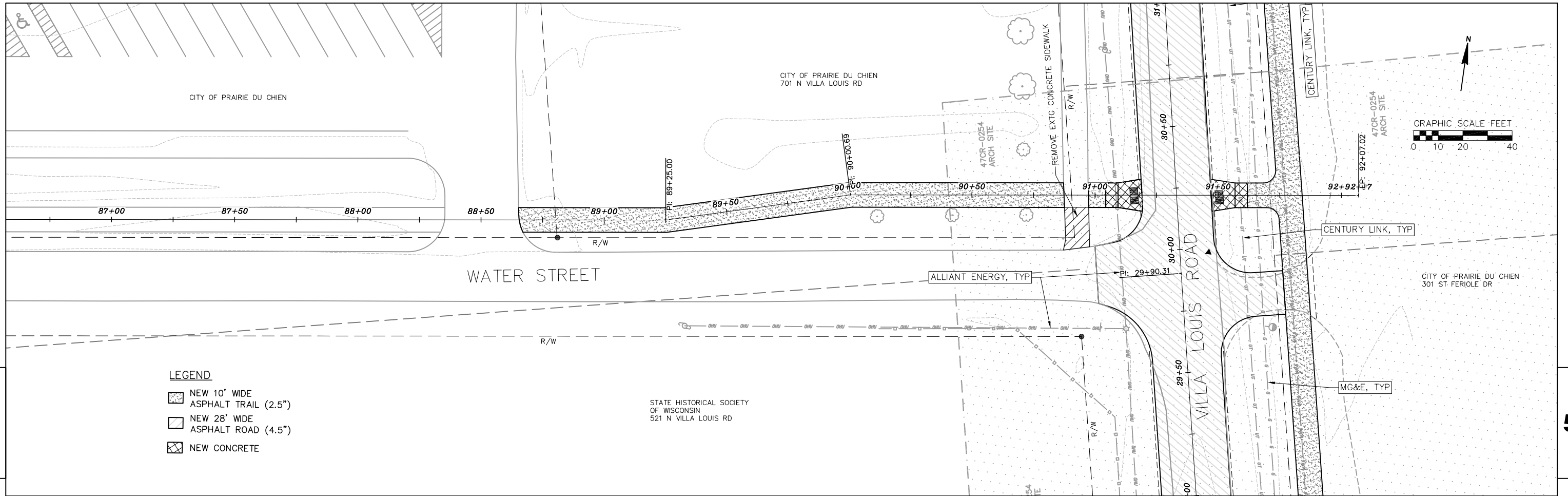
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PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      PLAN AND PROFILE: VILLA LOUIS ROAD      SHEET **E**



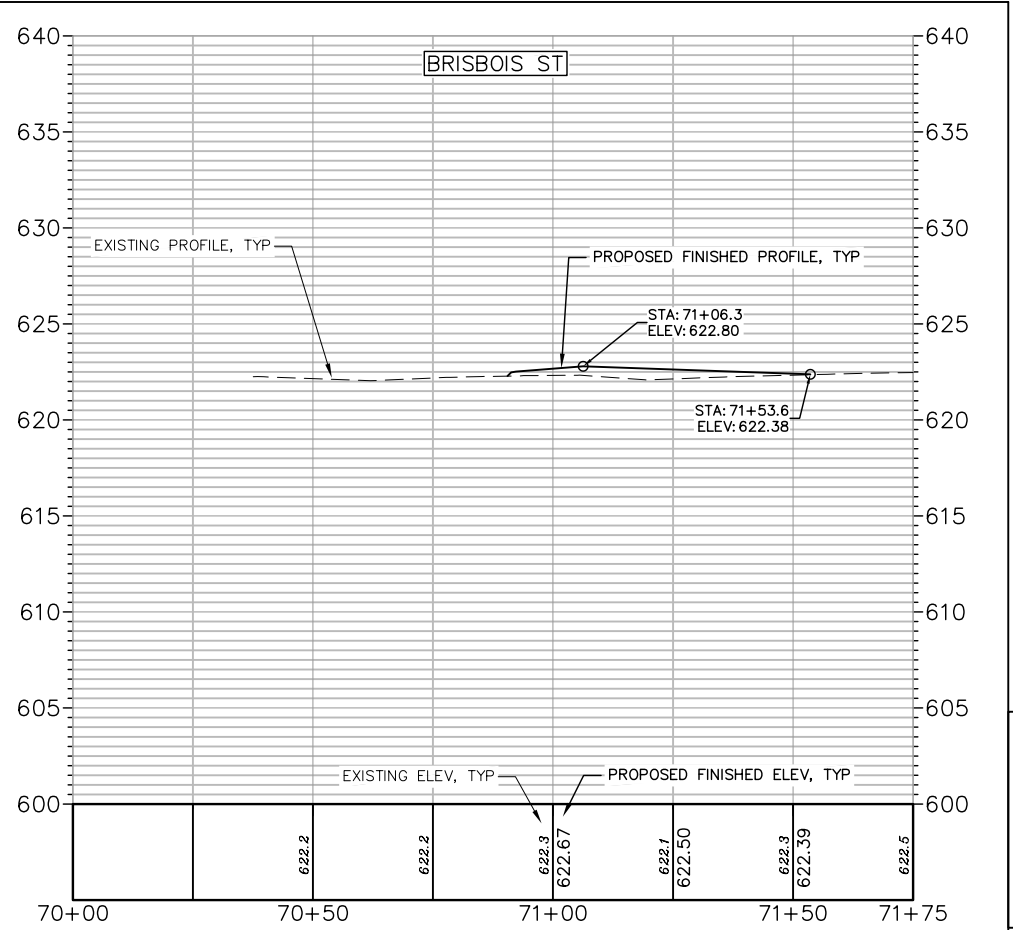
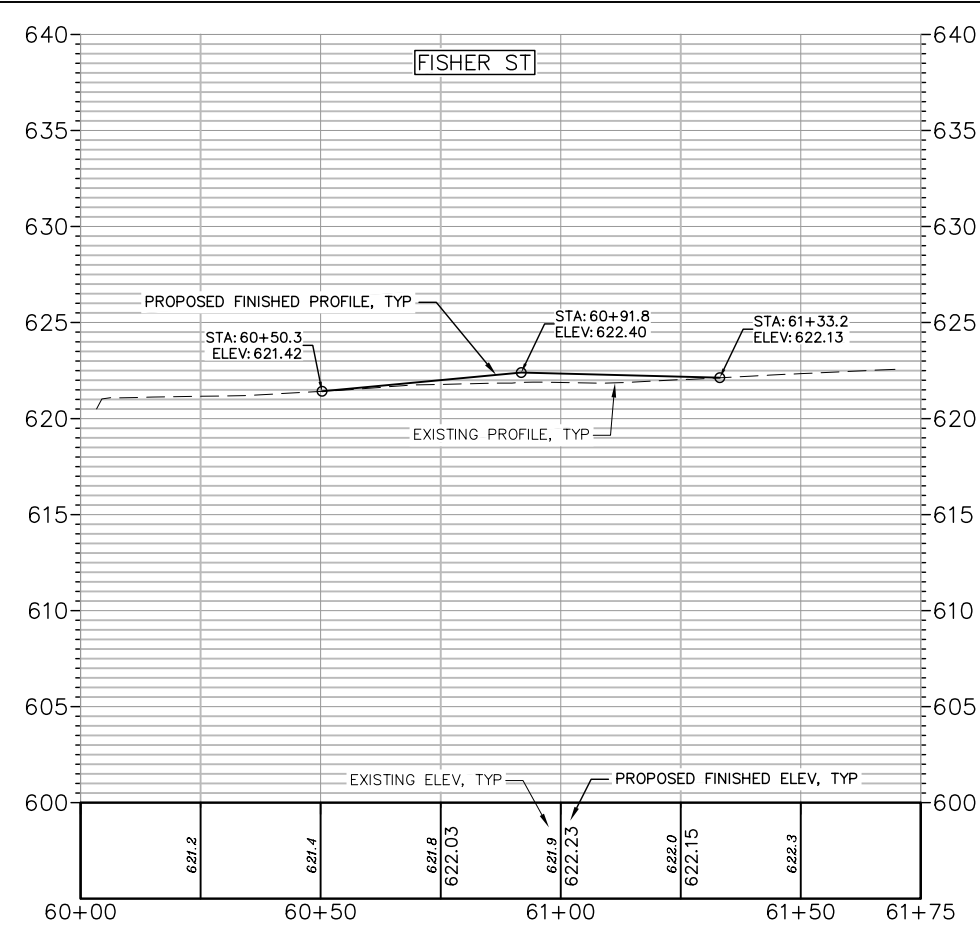
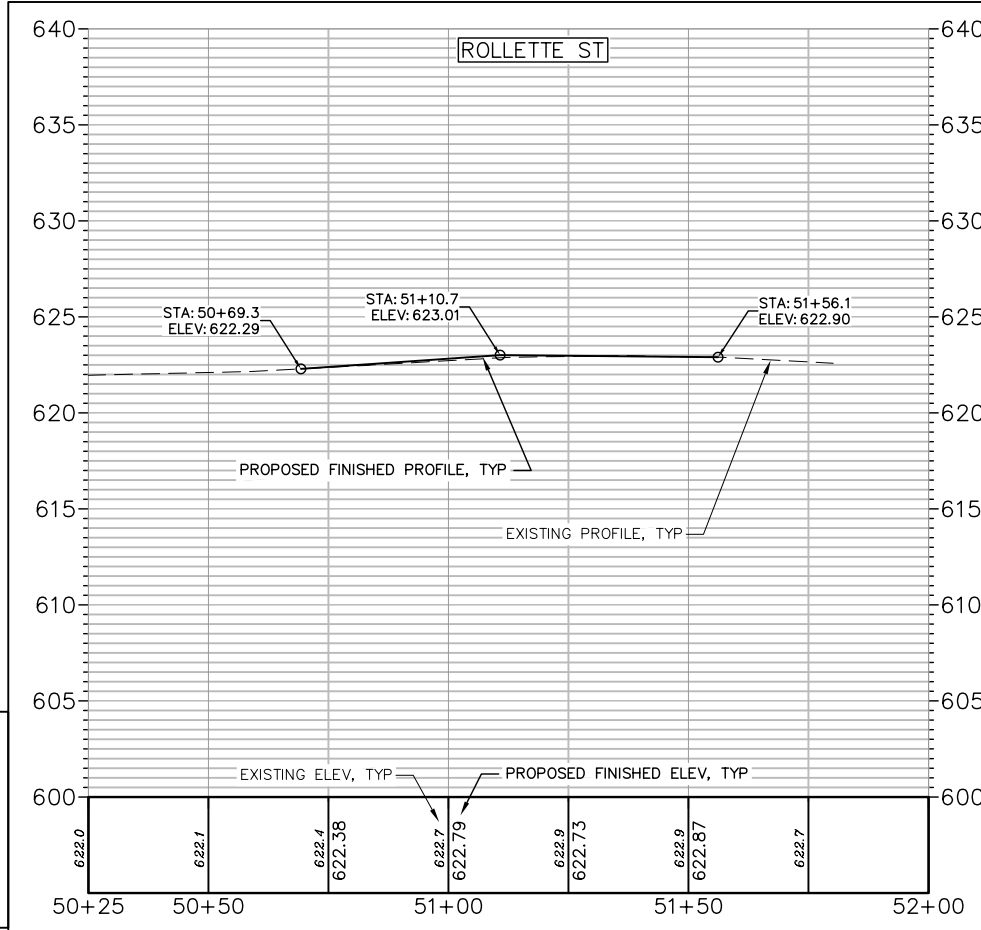
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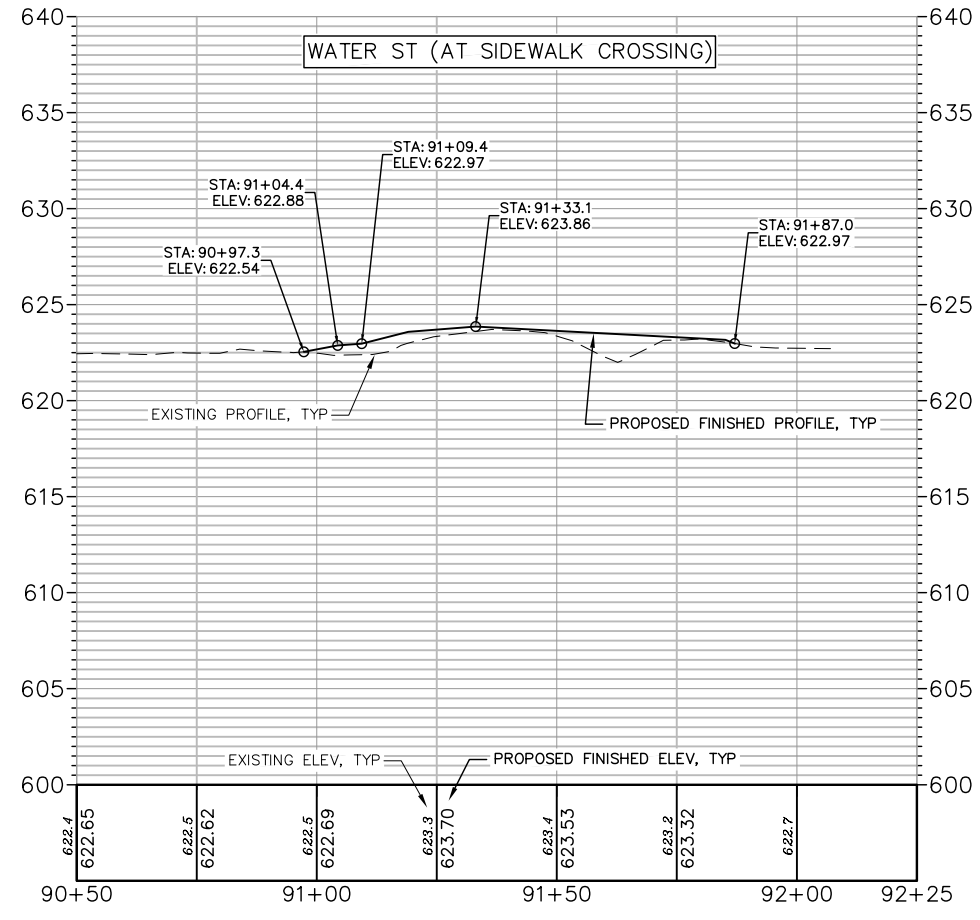
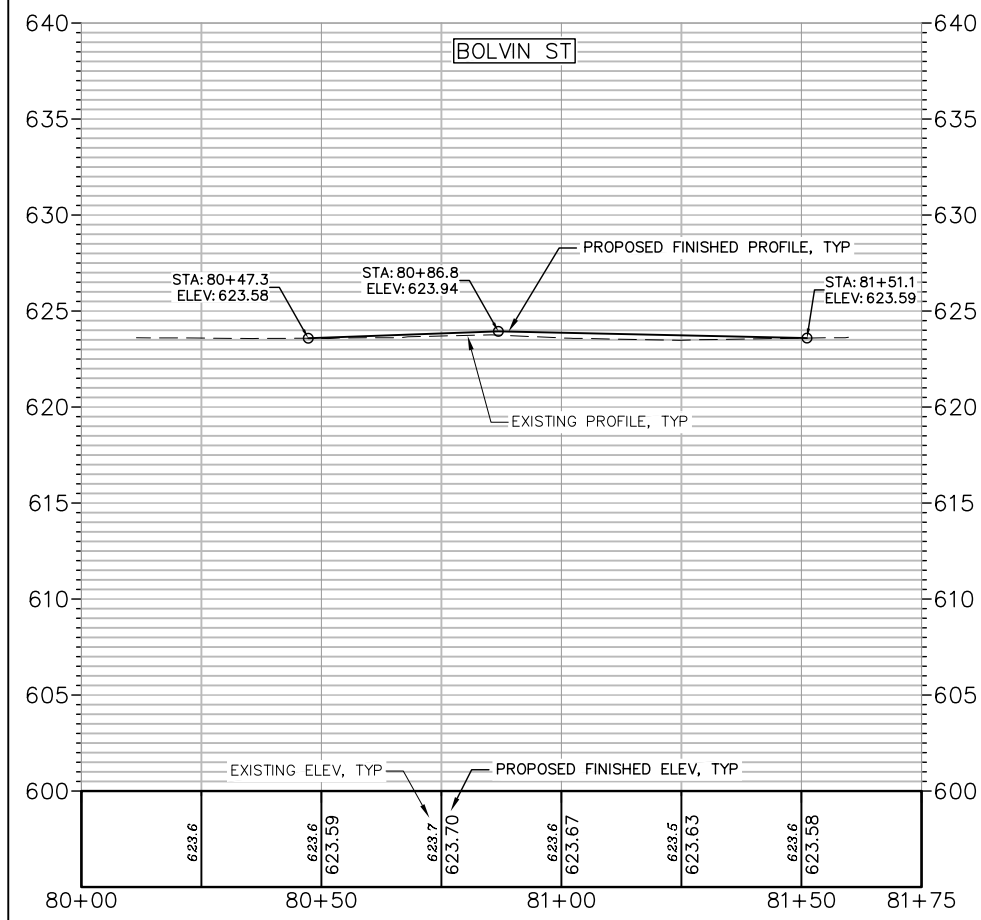
PROJECT NO: 5997-00-41 | HWY: WATER STREET | COUNTY: CRAWFORD | PLAN AND PROFILE: VILLA LOUIS ROAD | SHEET | **E**



5

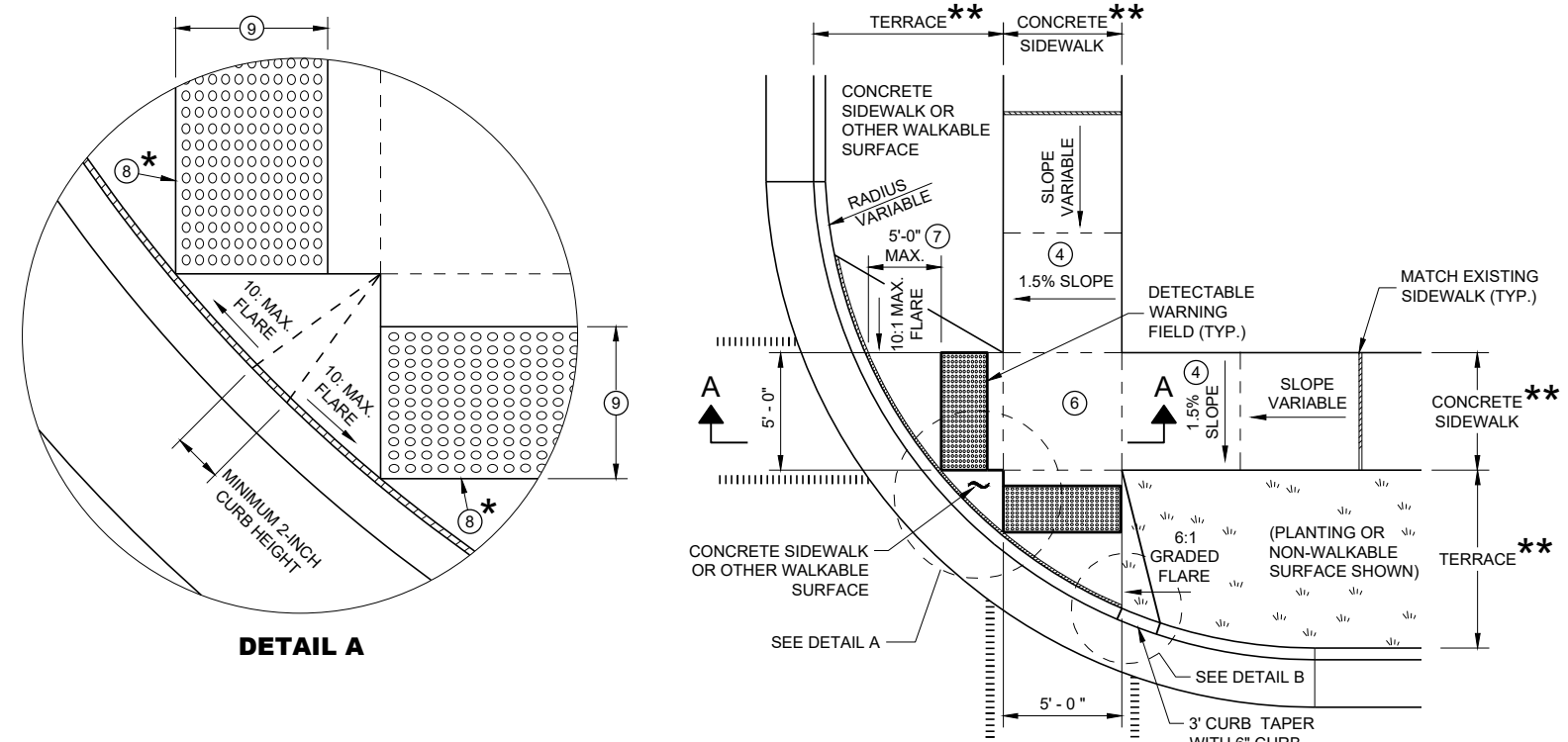


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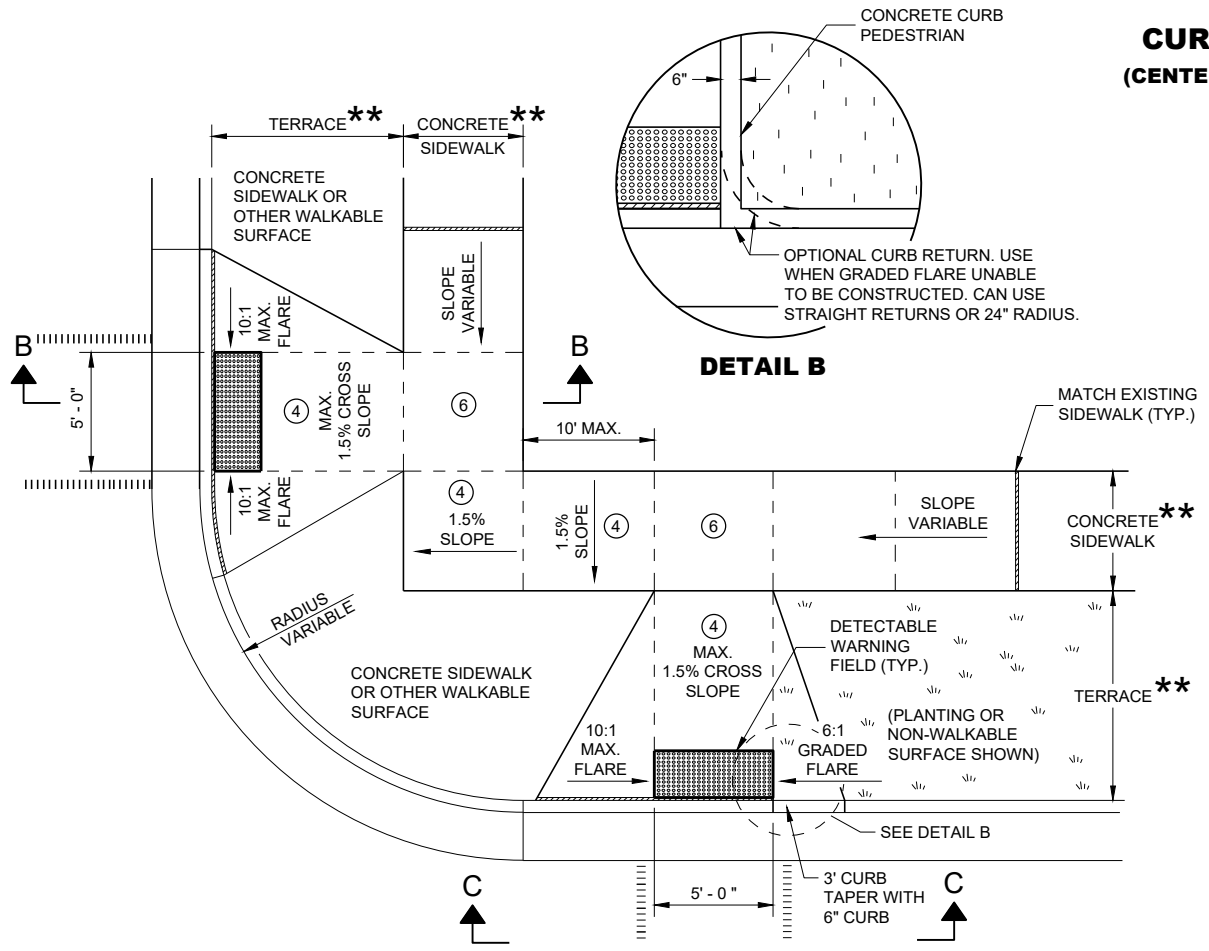


## Standard Detail Drawing List

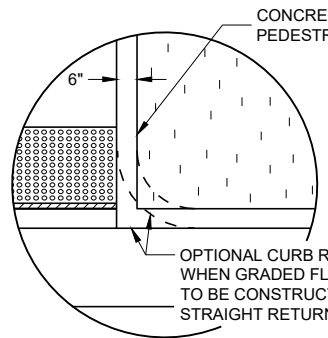
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-12	PULL BOX
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
14A02-01	TREE PLANTING DETAIL
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING



**PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)**



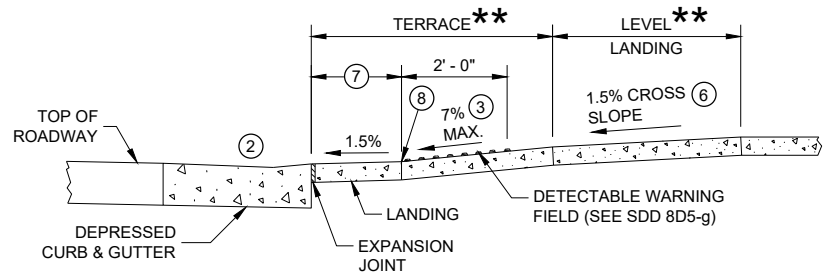
**PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)**



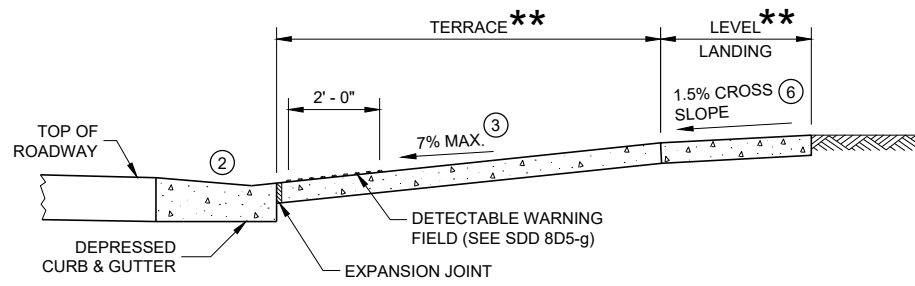
**DETAIL B**

**GENERAL NOTES**

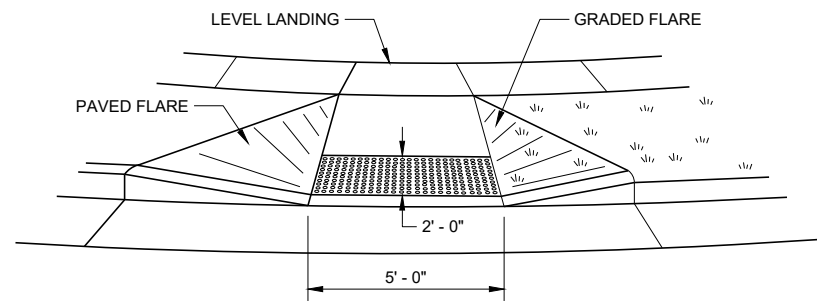
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

- \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

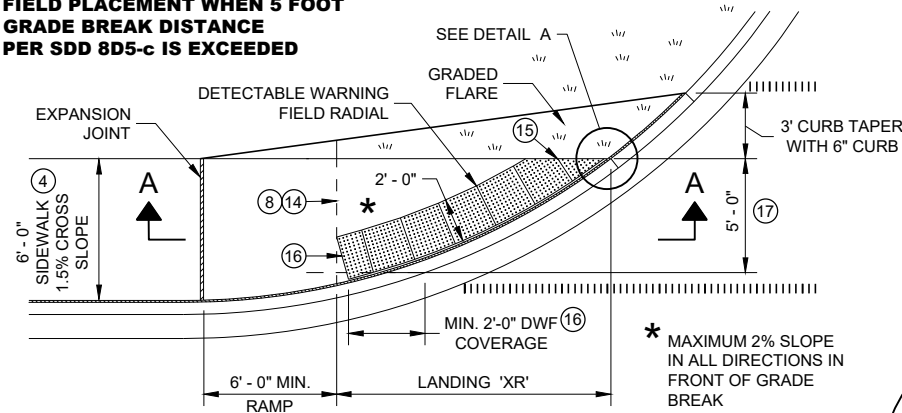
**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

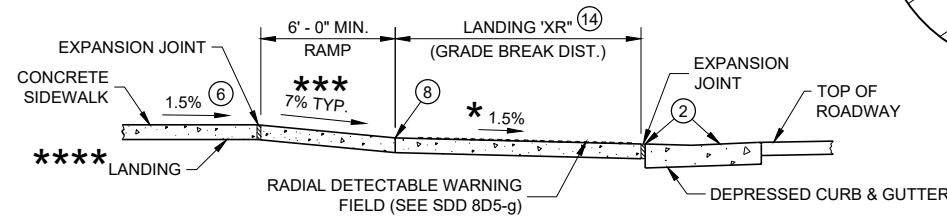
**CURB RAMPS  
TYPE 2 AND 3**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED**



**PLAN VIEW CURB RAMP TYPE 4A1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

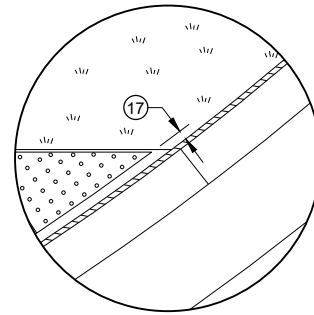


**SECTION A - A FOR TYPE 4A1**

\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
  - - - - - CONTRACTION JOINT SIDEWALK
  - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

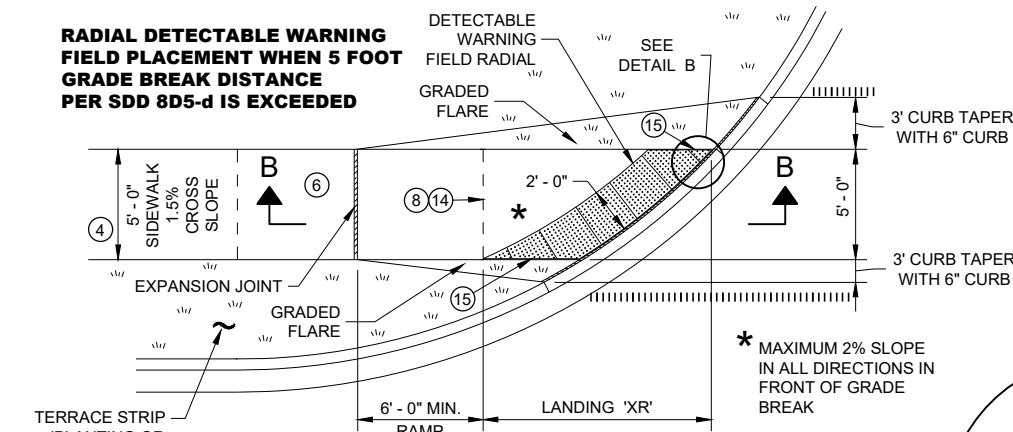


**DETAIL A**

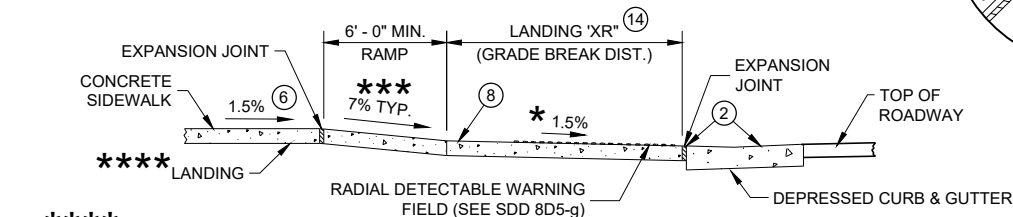
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED**



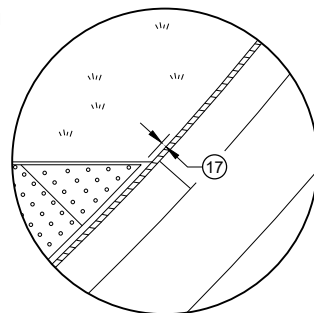
**PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**

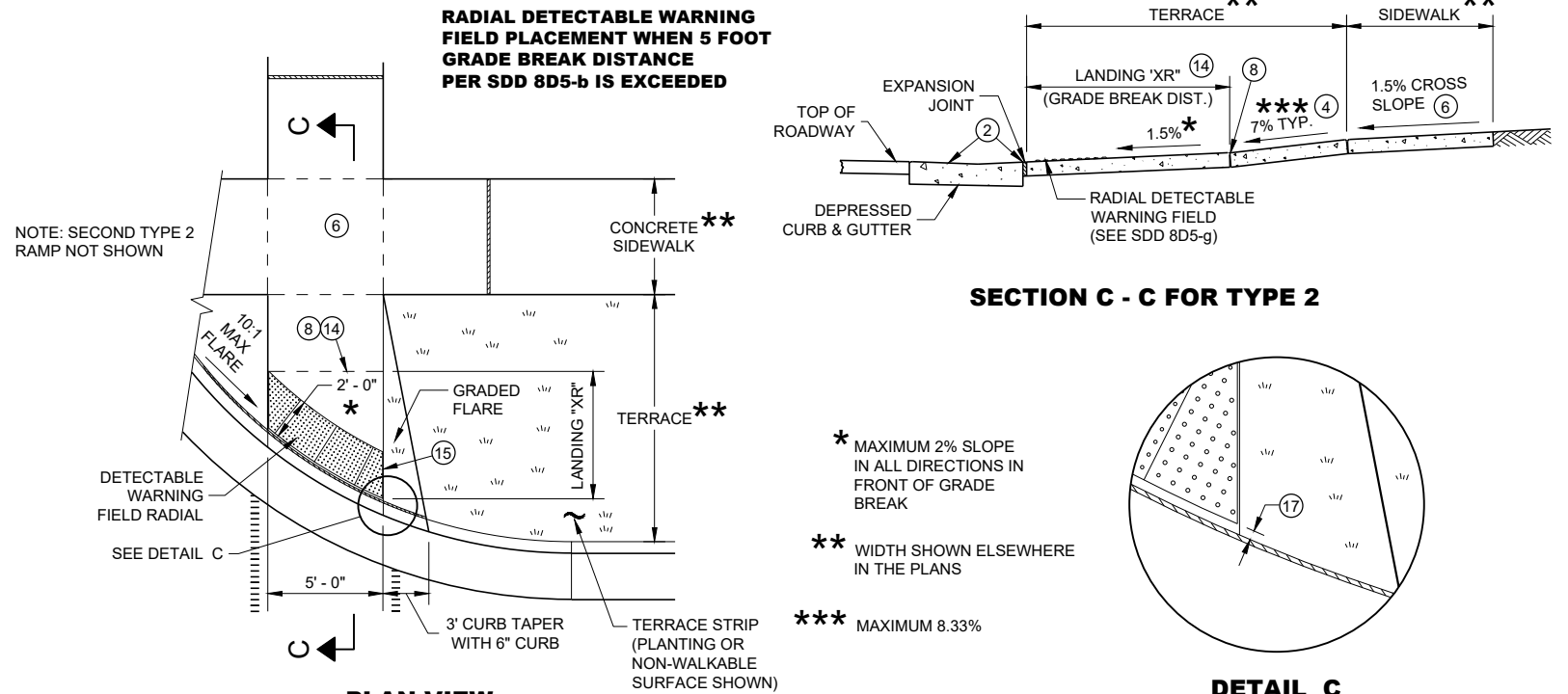
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%



**DETAIL B**

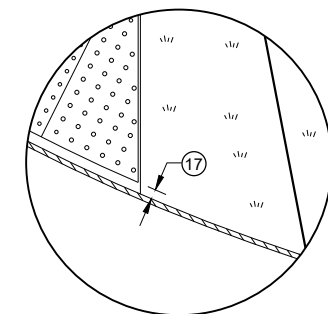
**RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW CURB RAMP TYPE 2 (GRADE BREAK DISTANCE GREATER THAN 5 FEET) (ON LINE WITH SIDEWALK)**

NOTE: SECOND TYPE 2 RAMP NOT SHOWN

- \* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS
- \*\*\* MAXIMUM 8.33%



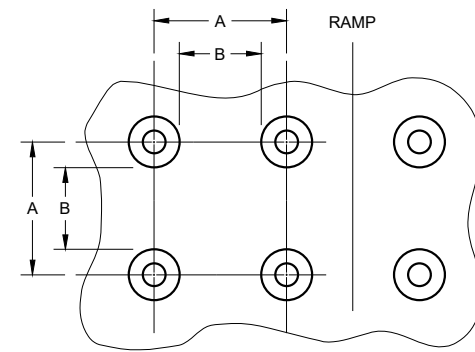
**DETAIL C**

**CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS**

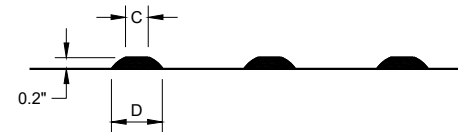
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

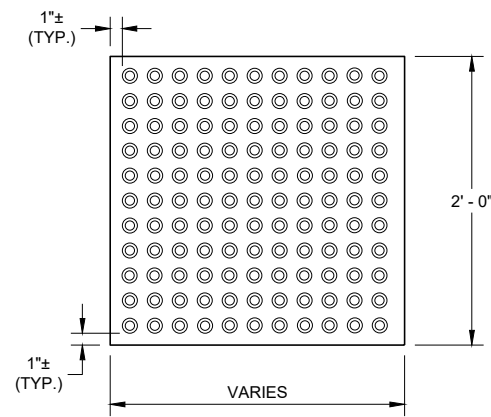


**PLAN VIEW**

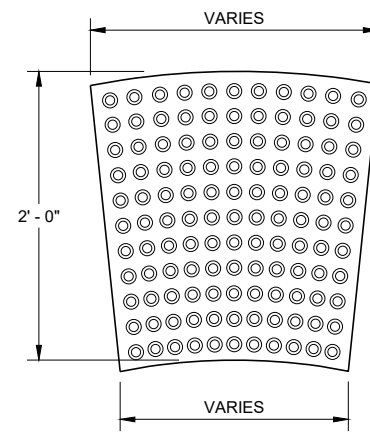


**ELEVATION VIEW**

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

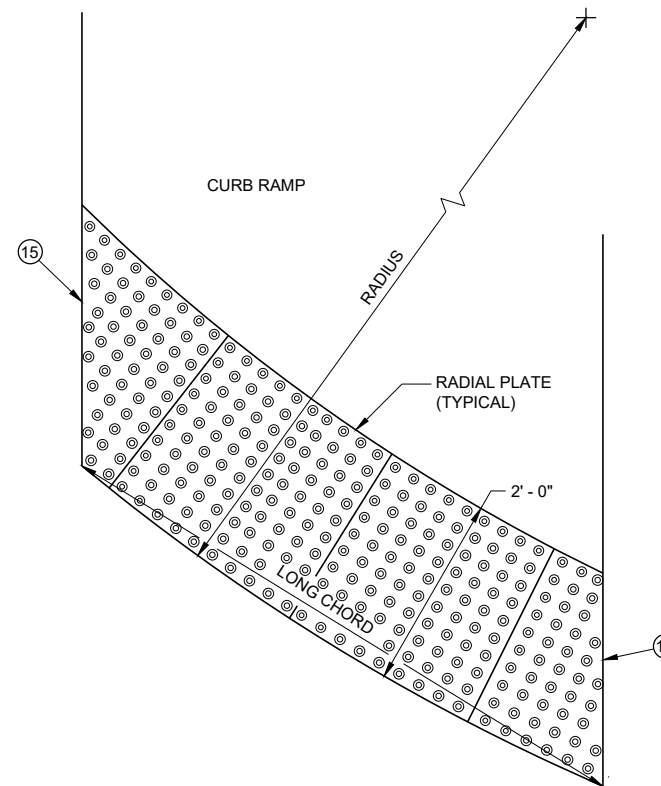


**RECTANGULAR  
PLATES**

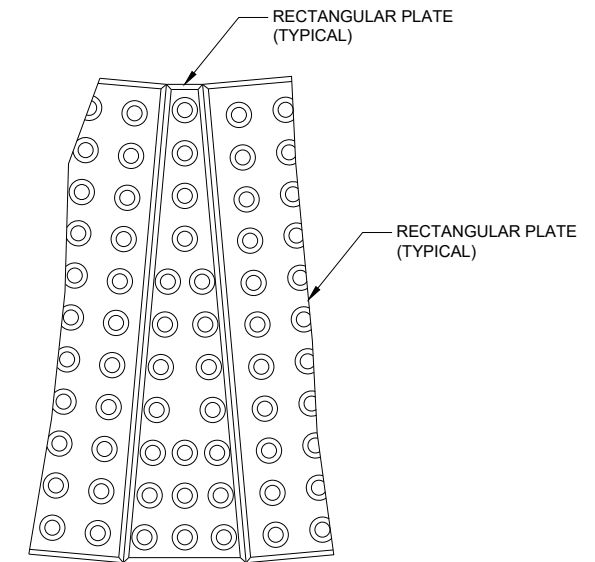


**RADIAL  
PLATES**

**PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)**



**PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES**



**PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL**

**GENERAL NOTES**

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

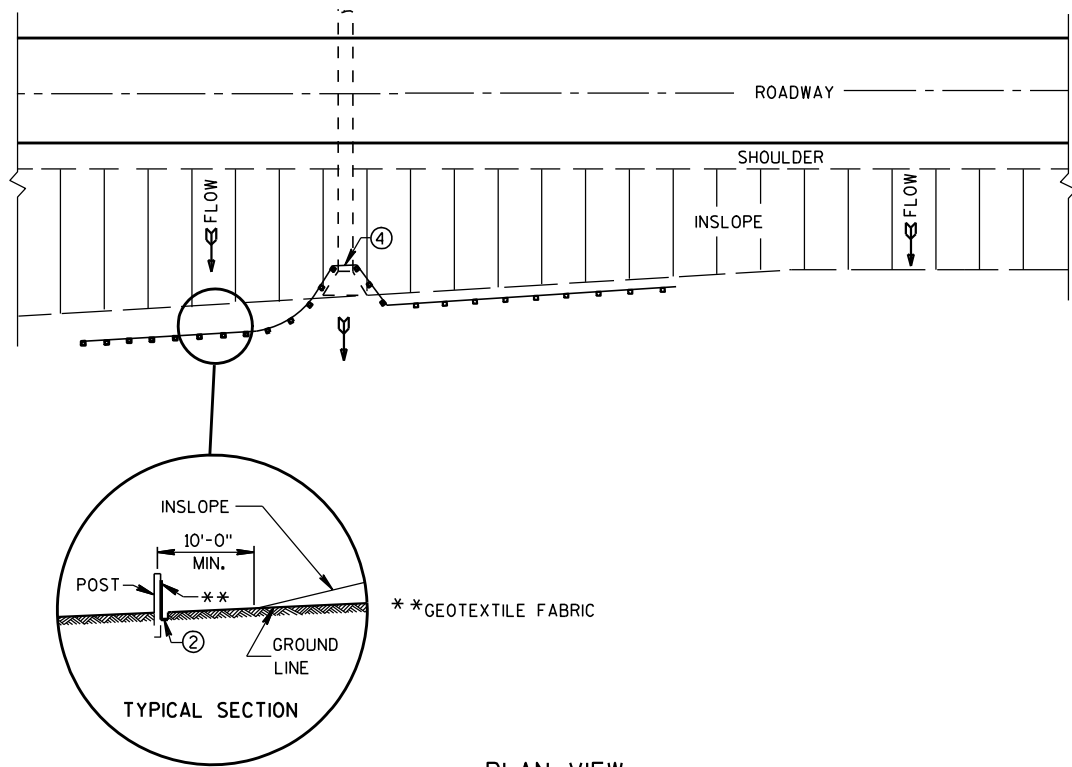
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

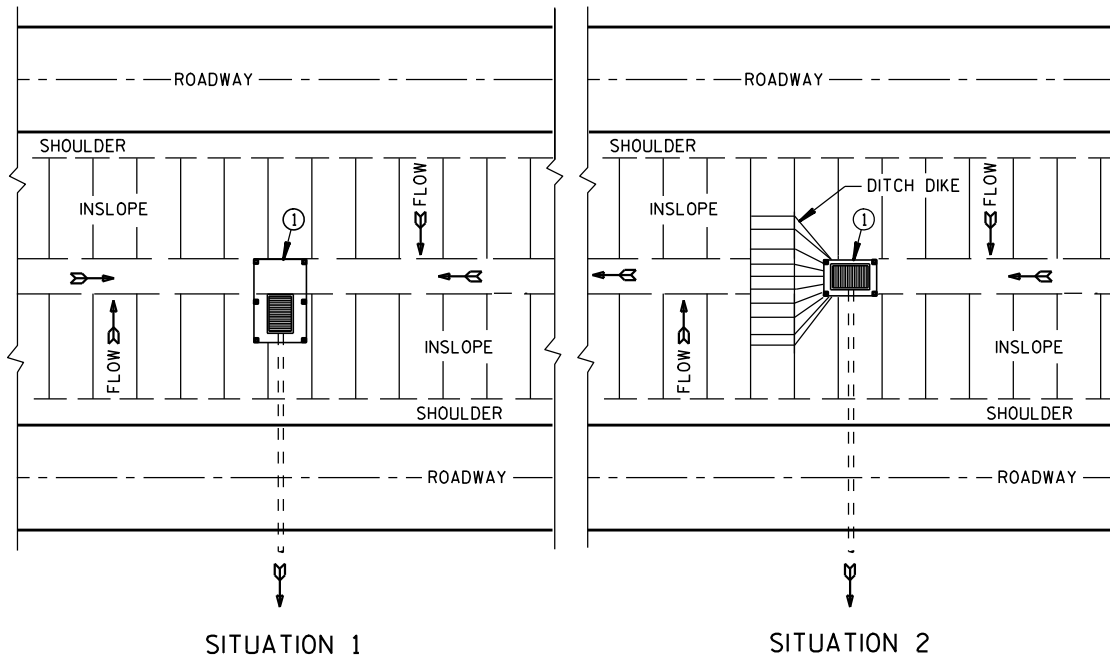
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

<b>CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

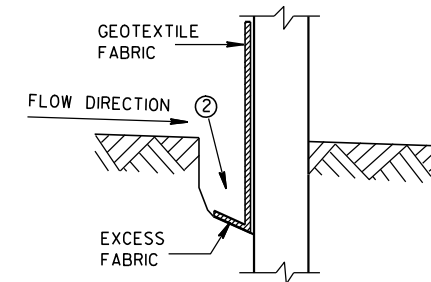


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

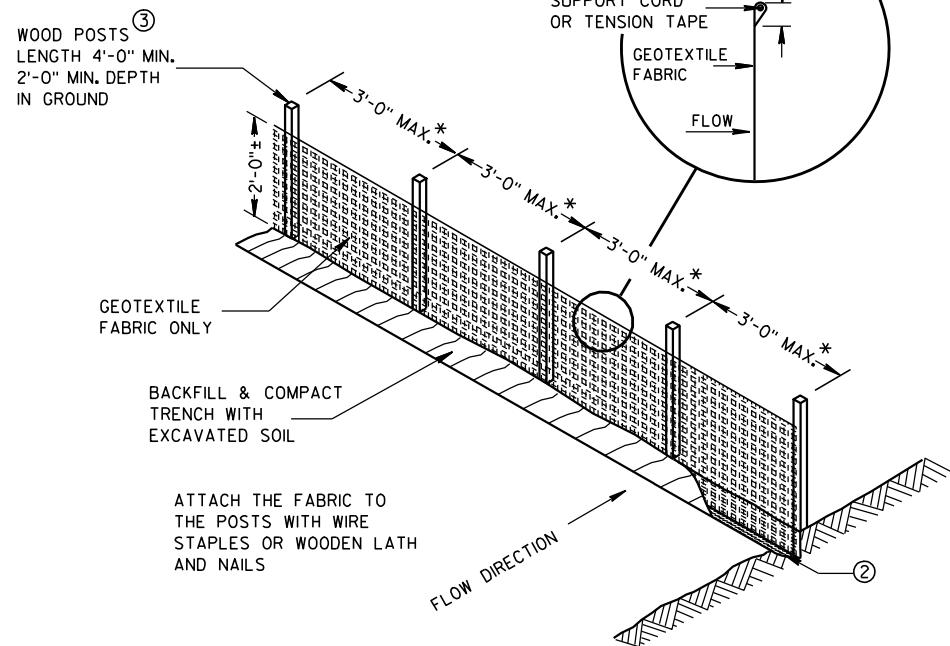
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



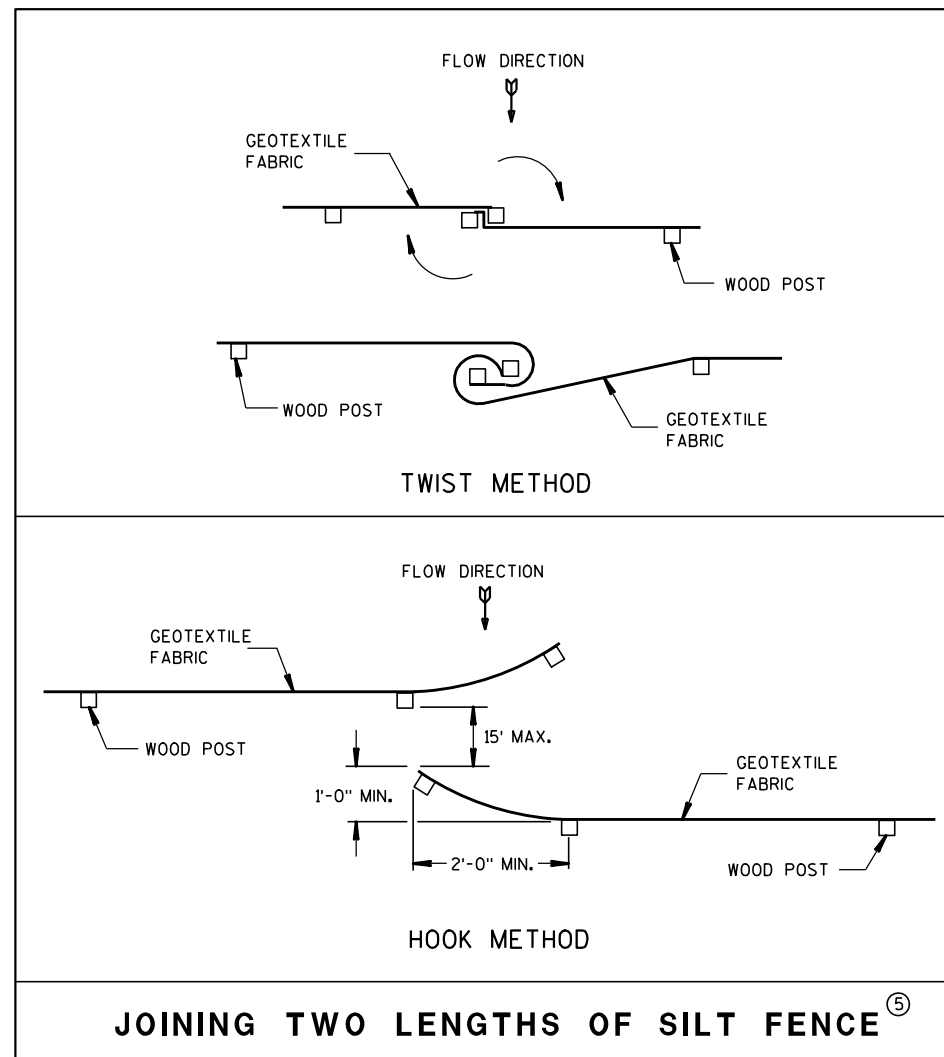
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

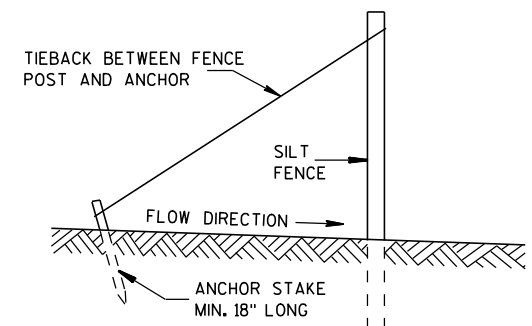


SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

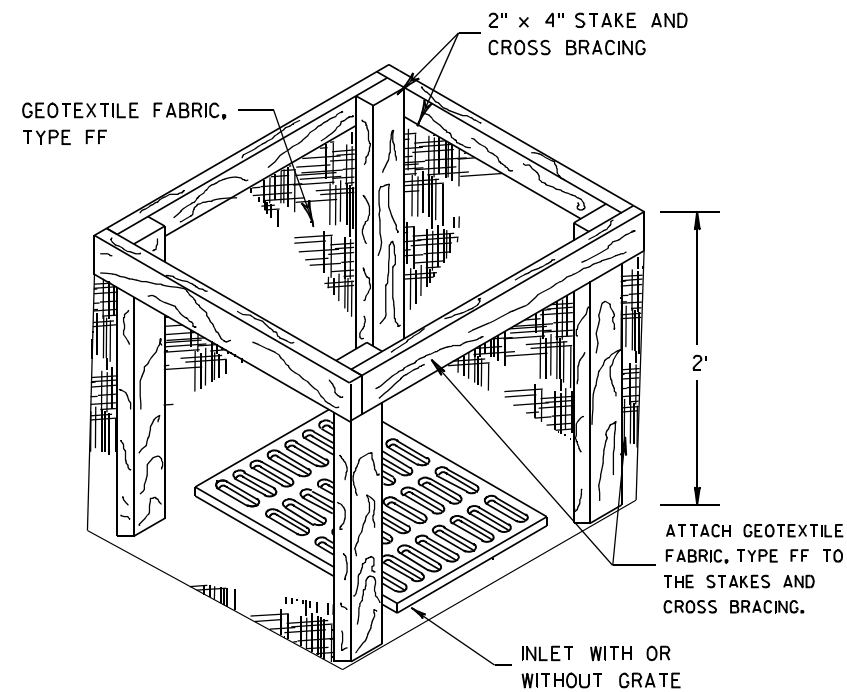
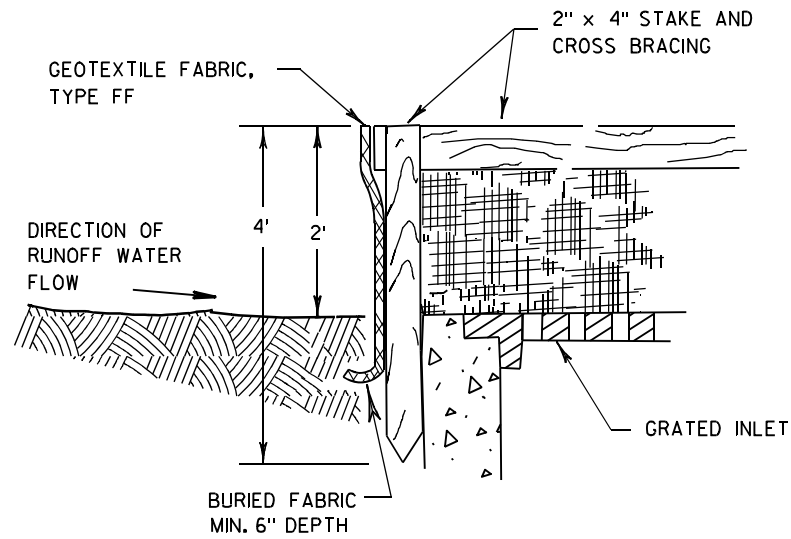
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05  
DATE

FHWA

/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



**INLET PROTECTION, TYPE A**

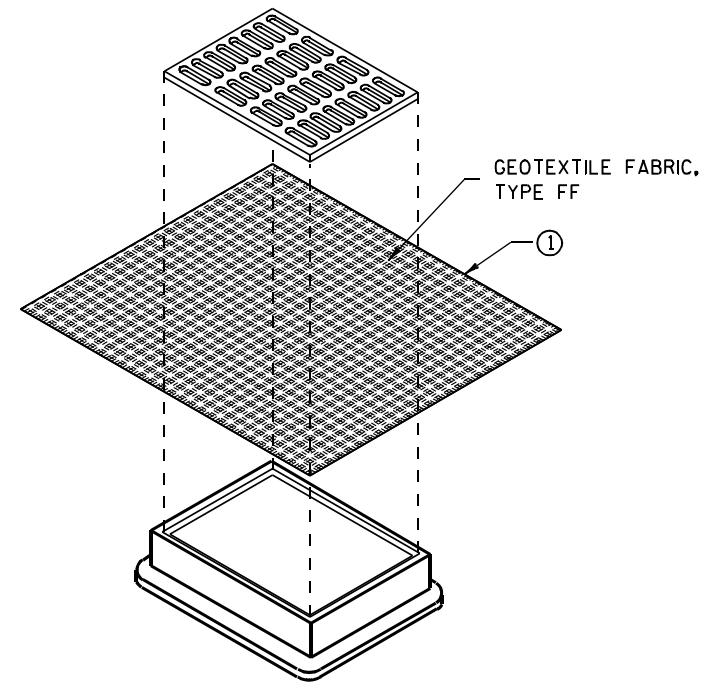
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

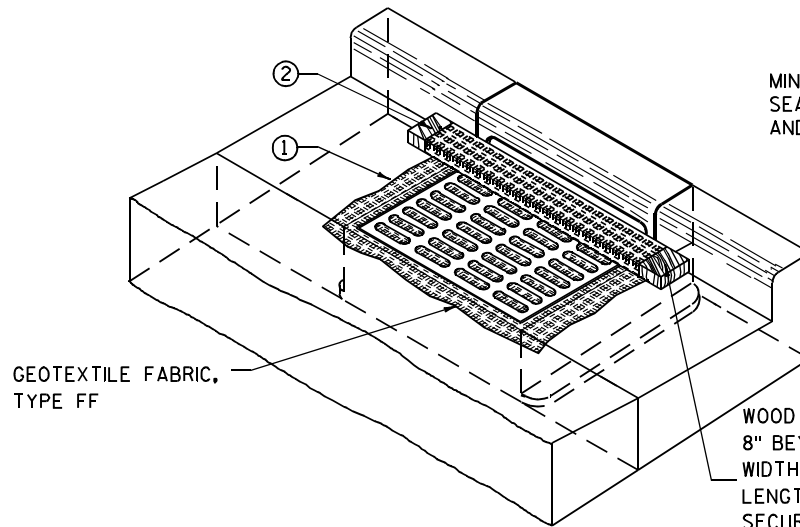
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

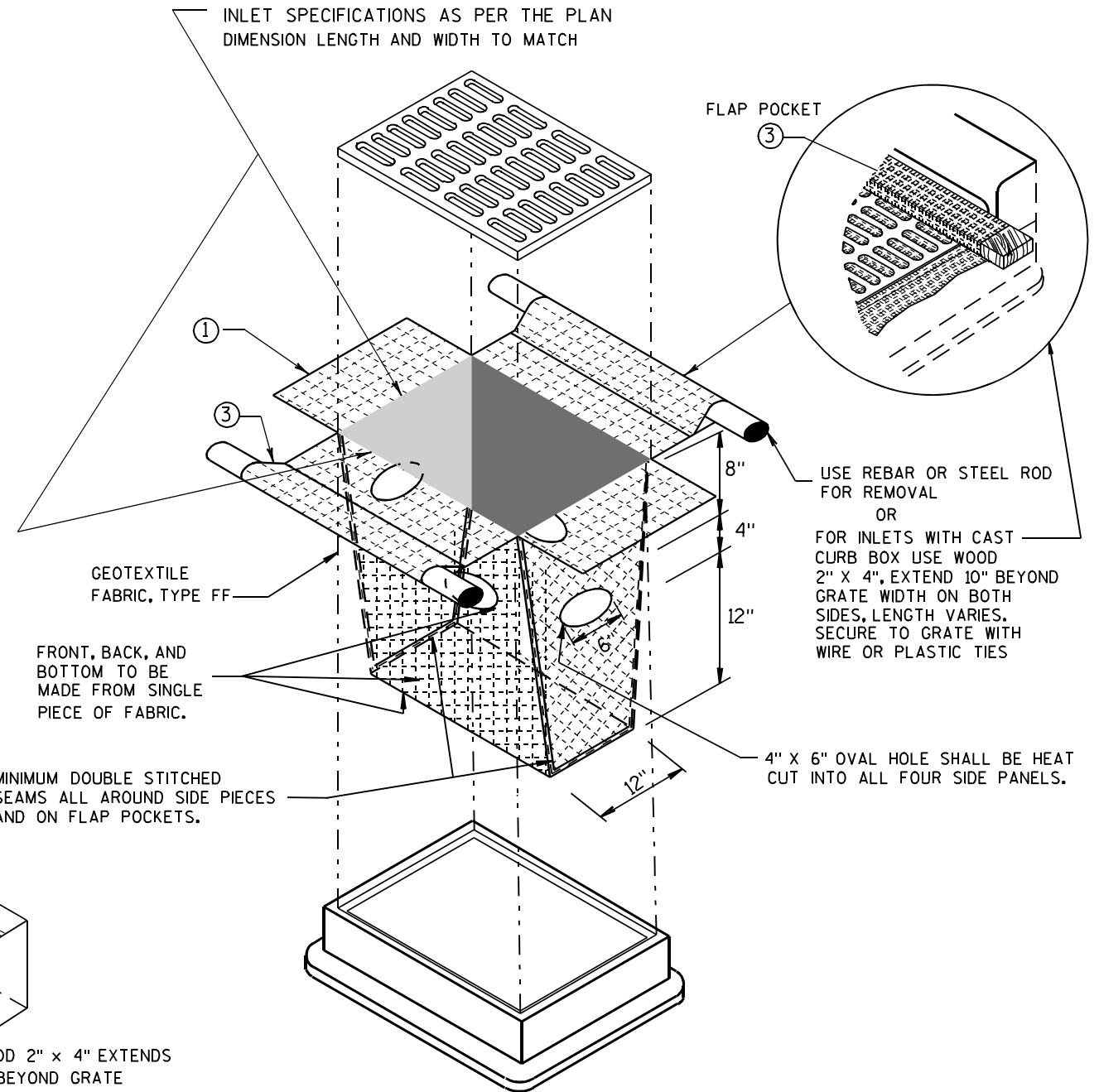
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

<b>INLET PROTECTION TYPE A, B, C, AND D</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Connestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

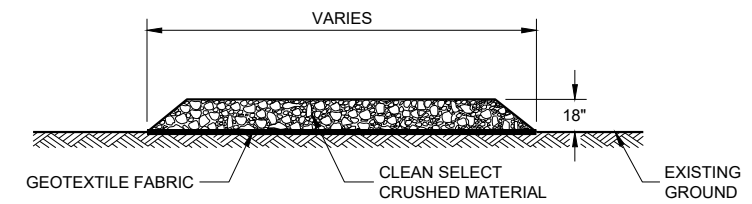
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

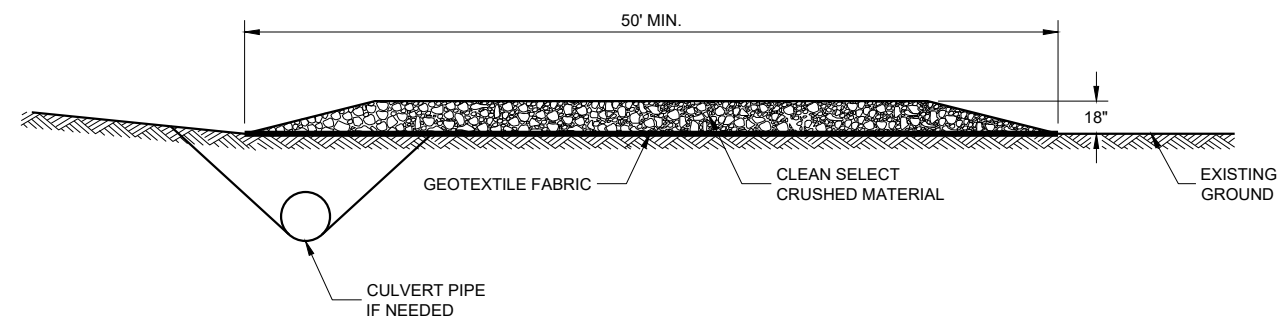
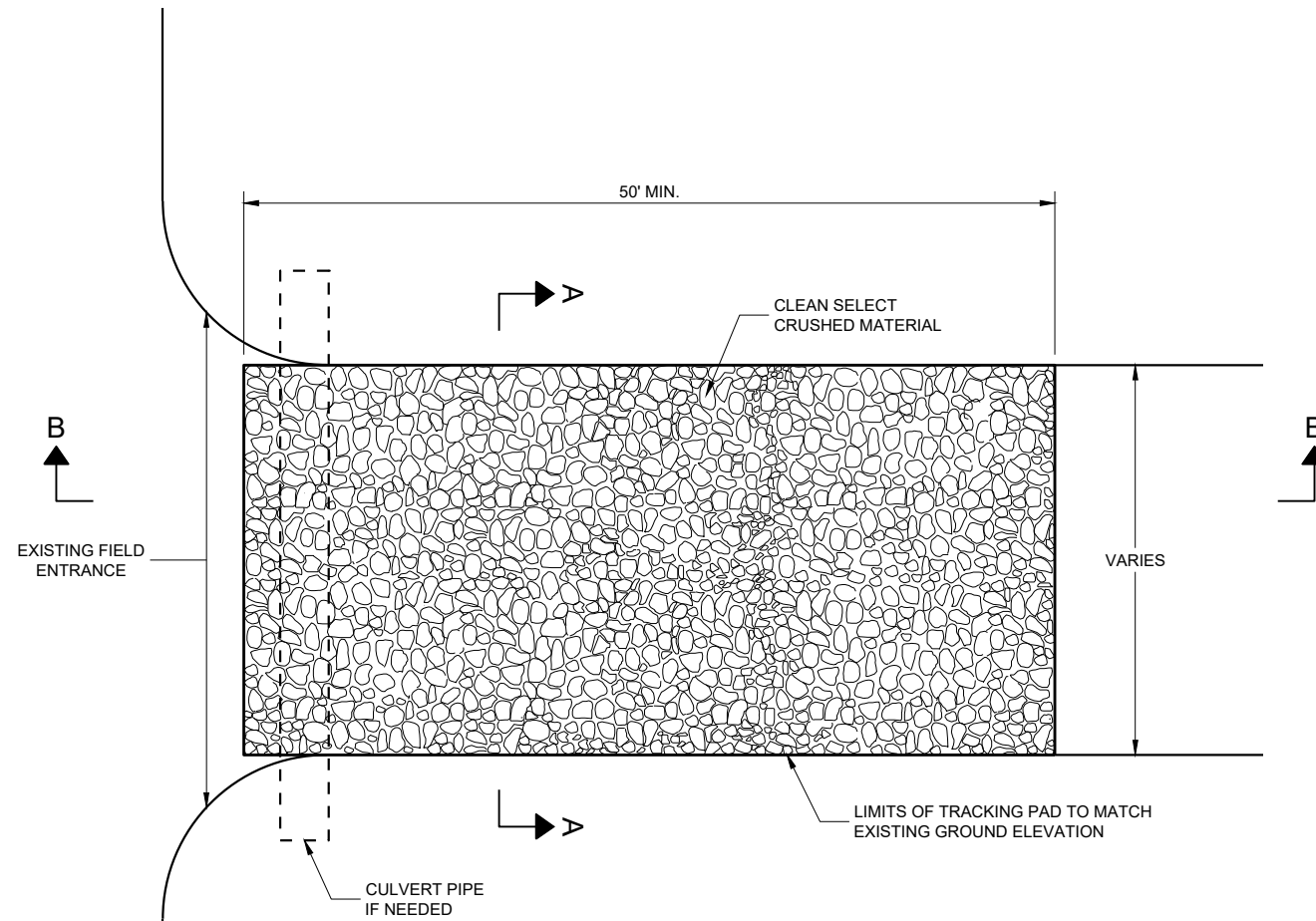
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**



**SECTION B - B**

**TRACKING PAD**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

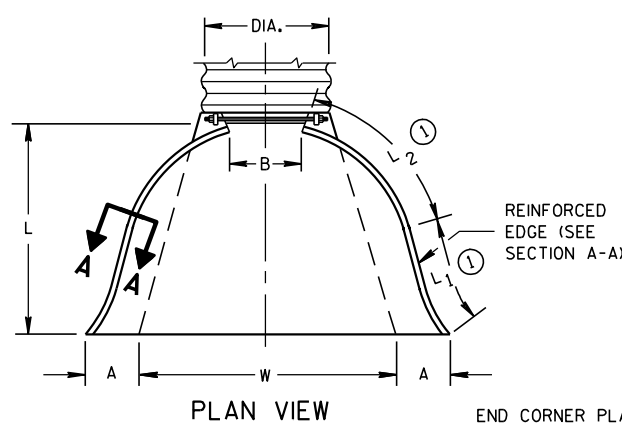


METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

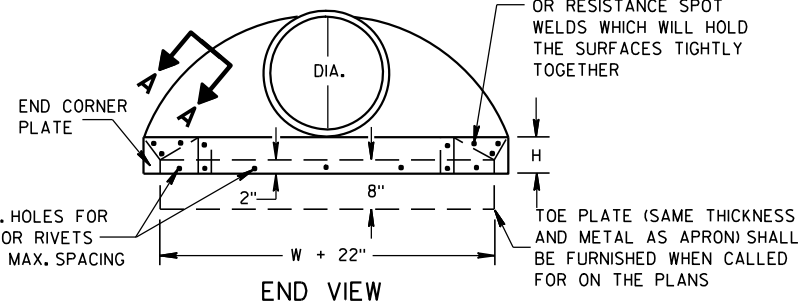
\* EXCEPT CENTER PANEL SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS									
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE	
	T	A	B	C	D	E	G		
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1	
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1	
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1	
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1	
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1	
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1	
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1	
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1	
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1	
48	5	24	72	26	98	84	5	3 to 1	
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1	
60	6	30-35	60	39	99	96	5	2 to 1	
66	6 1/2	30-35	72-78	21-27	99	102	5 1/2	2 to 1	
72	7	30-35	78	21	99	108	6	2 to 1	
78	7 1/2	30-35	78	21	99	114	6 1/2	2 to 1	
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1	
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1	

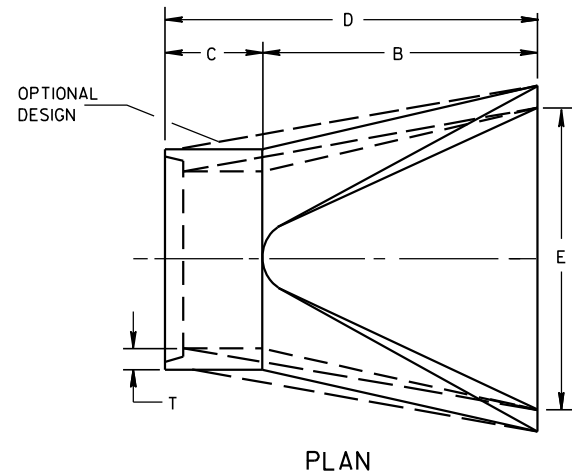
\* MINIMUM  
\*\* MAXIMUM



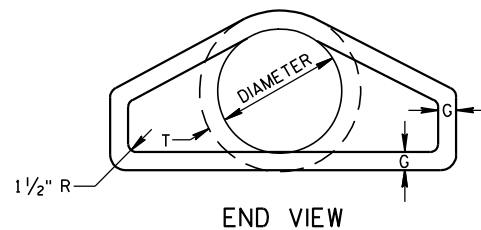
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



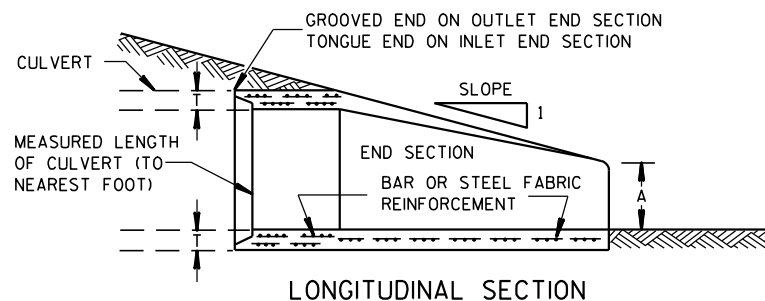
SIDE ELEVATION  
METAL ENDWALLS



PLAN

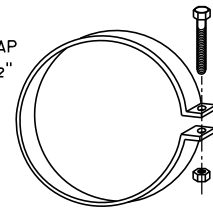


END VIEW

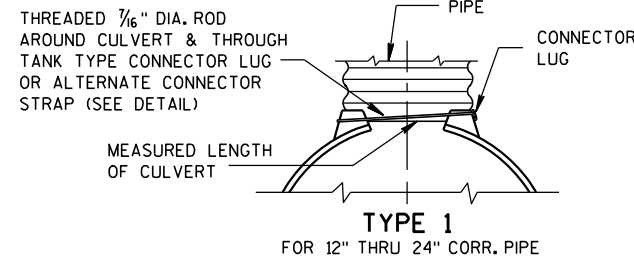


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

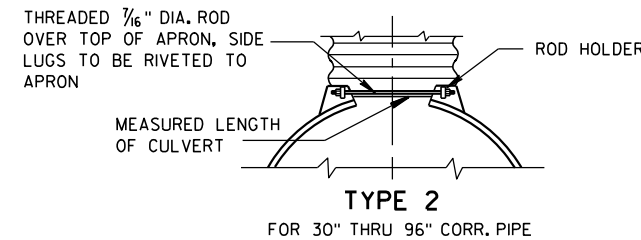
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



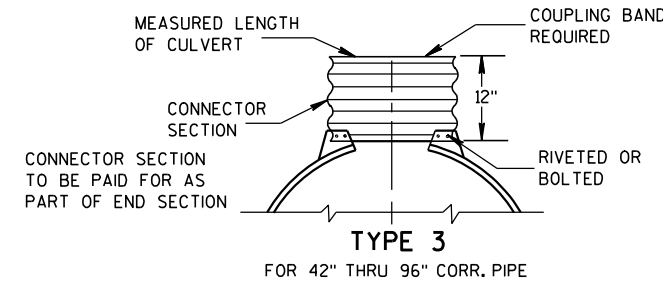
ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



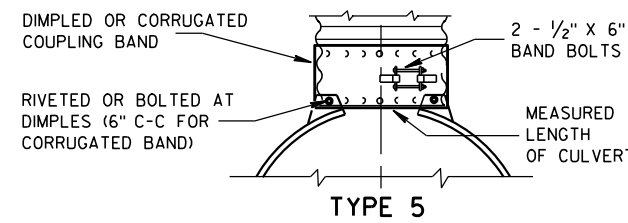
TYPE 1  
FOR 12" THRU 24" CORR. PIPE



TYPE 2  
FOR 30" THRU 96" CORR. PIPE



TYPE 3  
FOR 42" THRU 96" CORR. PIPE



TYPE 5  
ALTERNATE FOR:  
ALL SIZES CORRUGATED CIRCULAR PIPE

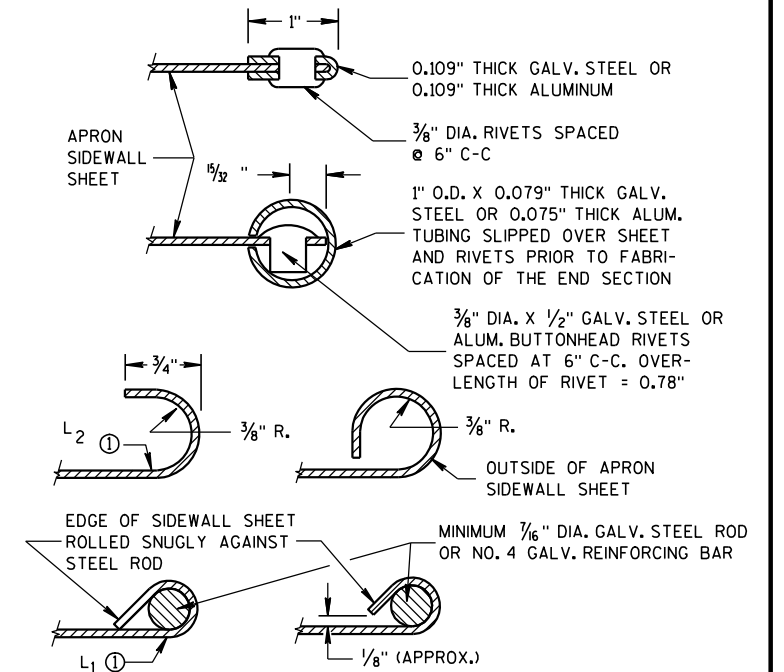
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

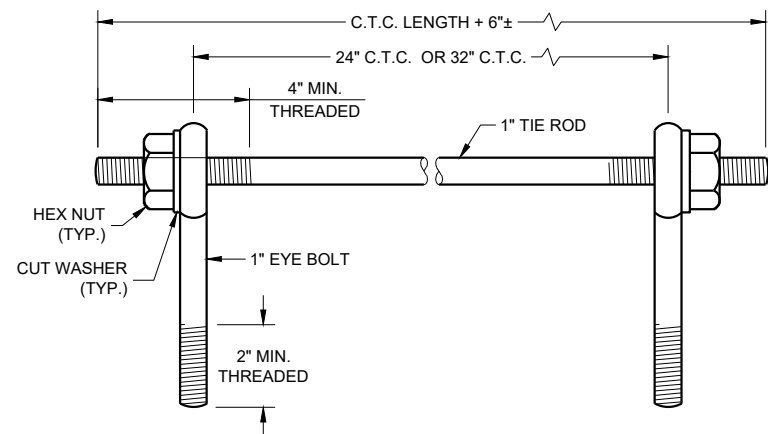
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
CULVERT PIPE

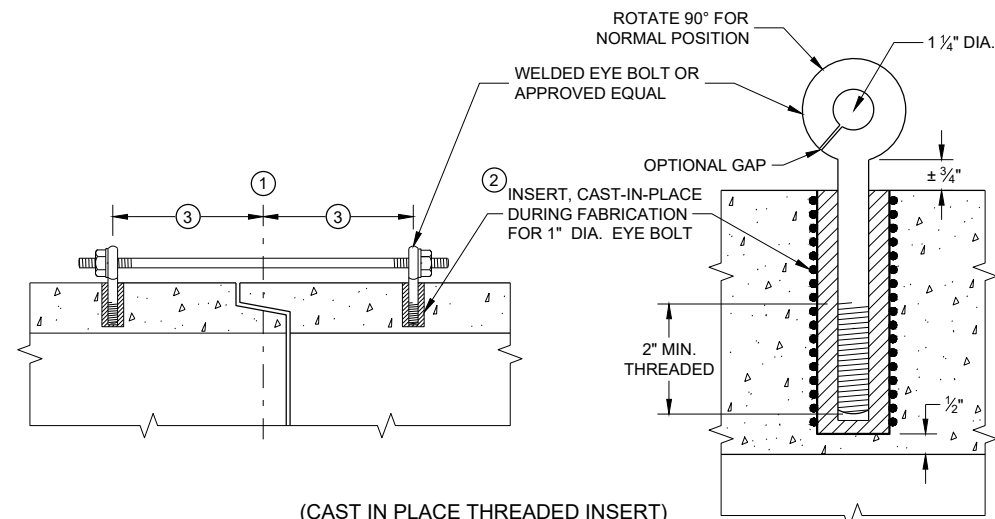
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/94 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



**EYE BOLTS AND TIE ROD**

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)**



(CAST IN PLACE THREADED INSERT)  
**LONGITUDINAL SECTIONS**

**GENERAL NOTES**

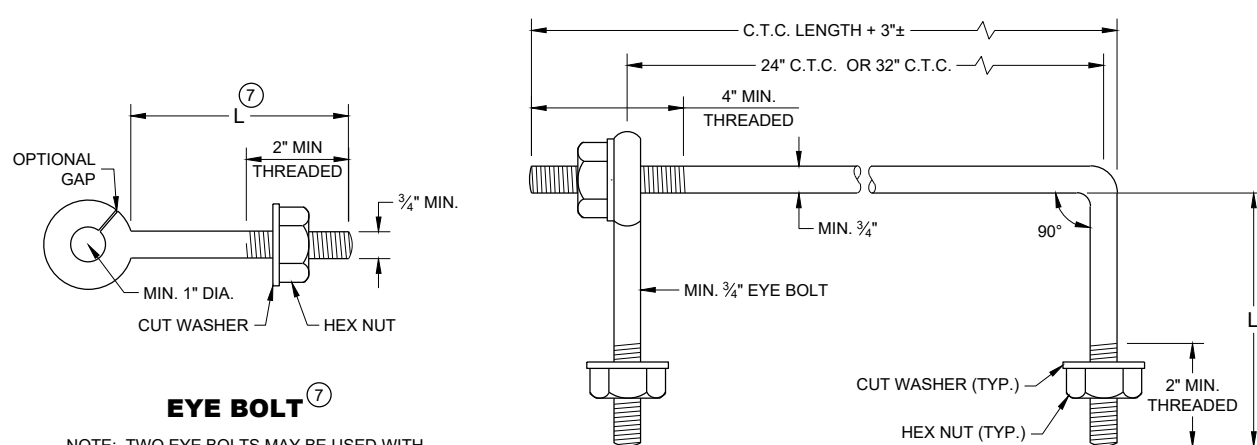
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

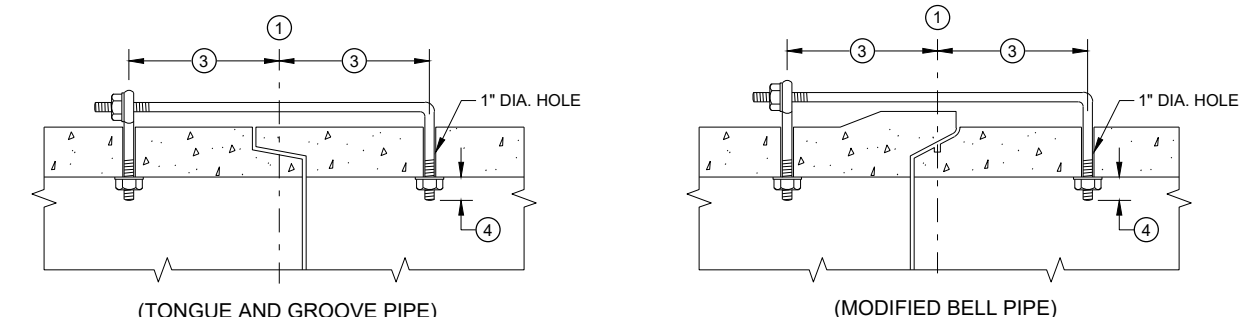
- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



**EYE BOLT** ⑦

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30\"/>

**EYE BOLT AND TIE ROD**



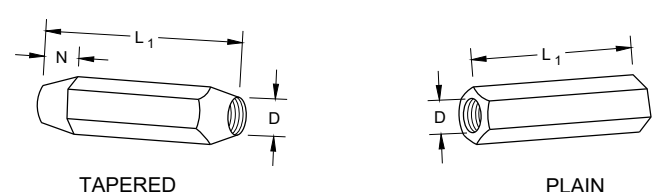
**LONGITUDINAL SECTION**  
(JOINT TIES FOR 18\"/>

**EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)**

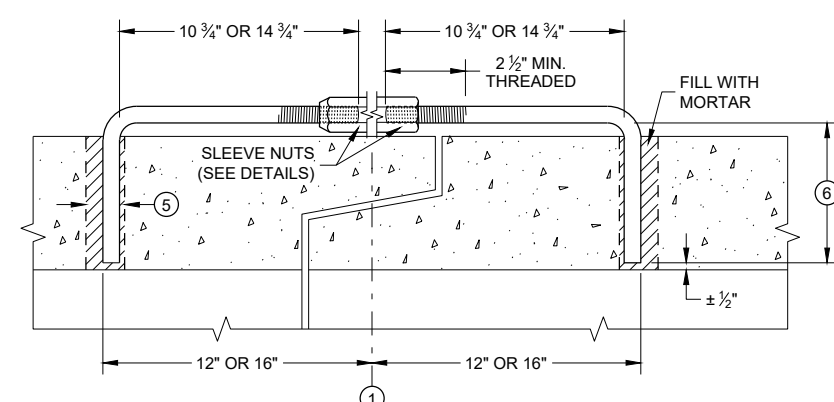
**ADJUSTABLE TIE ROD TABLE**

PIPE DIAMETER	TIE ROD DIAMETER	D	L <sub>1</sub>	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

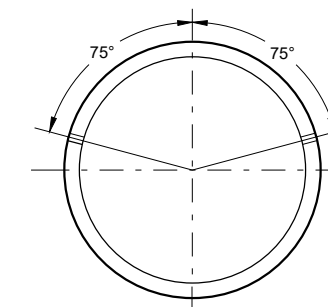


**RIGHT AND LEFT THREADS SLEEVE NUTS**



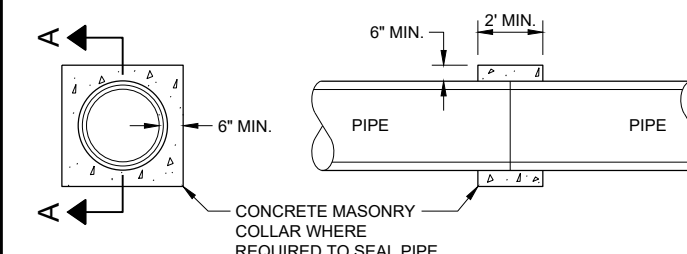
**LONGITUDINAL SECTION**

**ADJUSTABLE TIE ROD (ALTERNATE NO. 3)**



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

**TRANSVERSE SECTION**



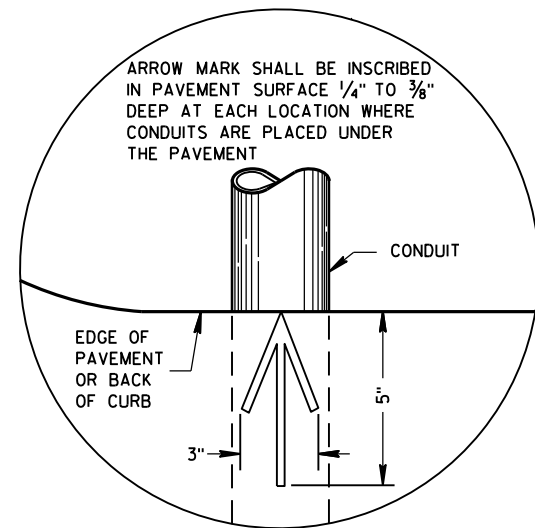
**SECTION A - A**  
**CONCRETE COLLAR DETAIL**

**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

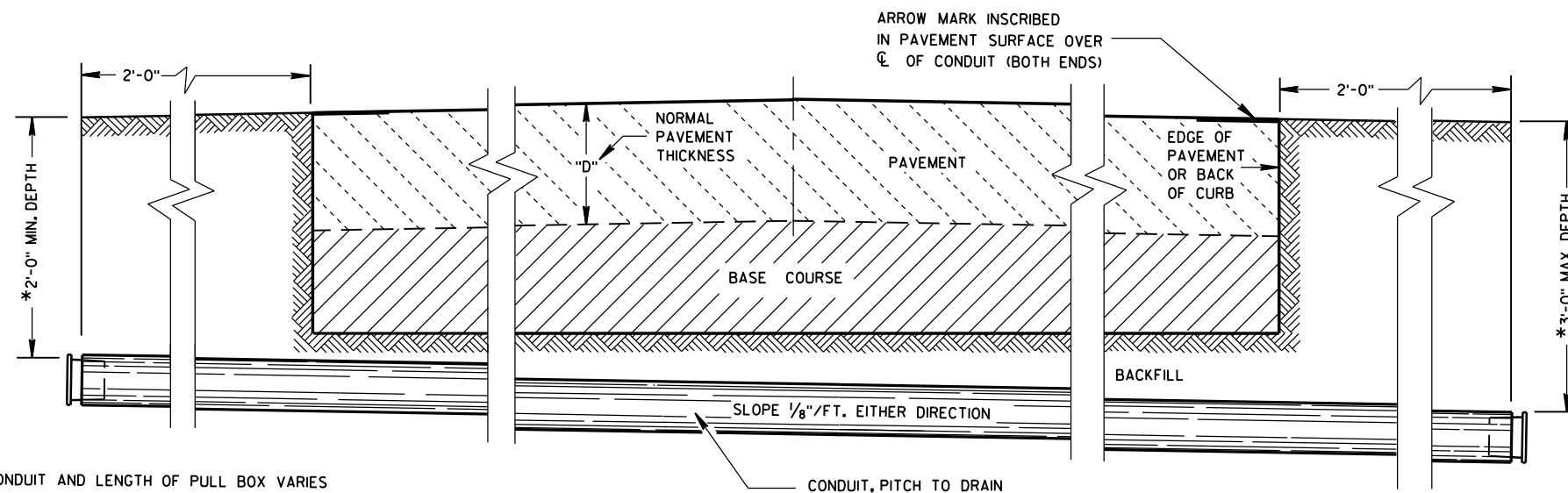
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



**PLAN VIEW  
ARROW MARK**



**SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

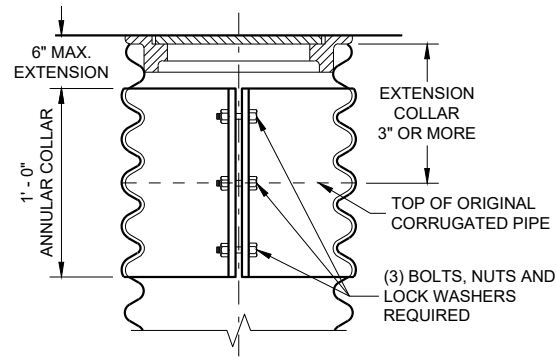
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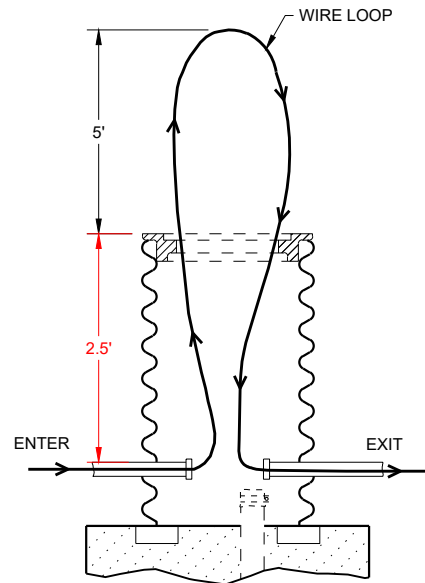
S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

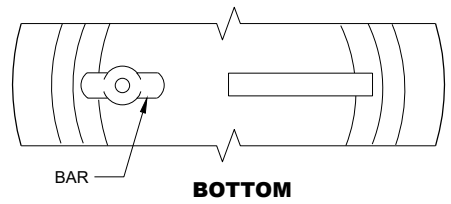
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



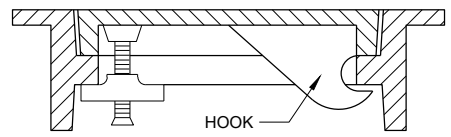
**CORRUGATED PIPE EXTENDER**



**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**



**BOTTOM**



**SECTION**

**ALTERNATE COVER (LOCKING)  
TIGHTENING BAR TYPE**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

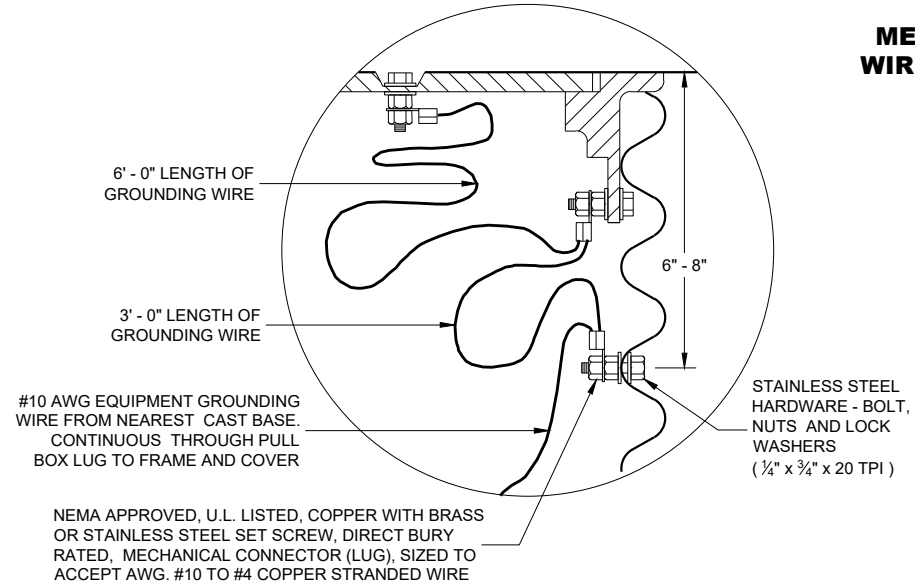
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

**TABLE OF NOMINAL DIMENSIONS AND WEIGHTS**

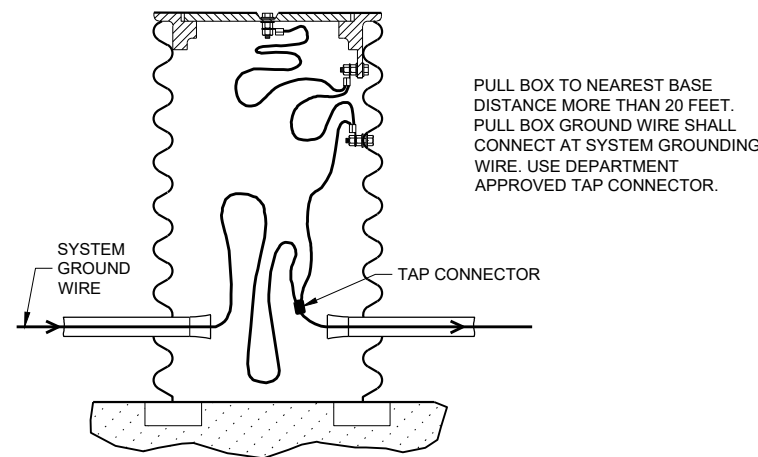
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH**	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
		<b>WEIGHT IN POUNDS*</b>								
FRAME AND COVER		60	60	60	110	110	110	155	155	155

\* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

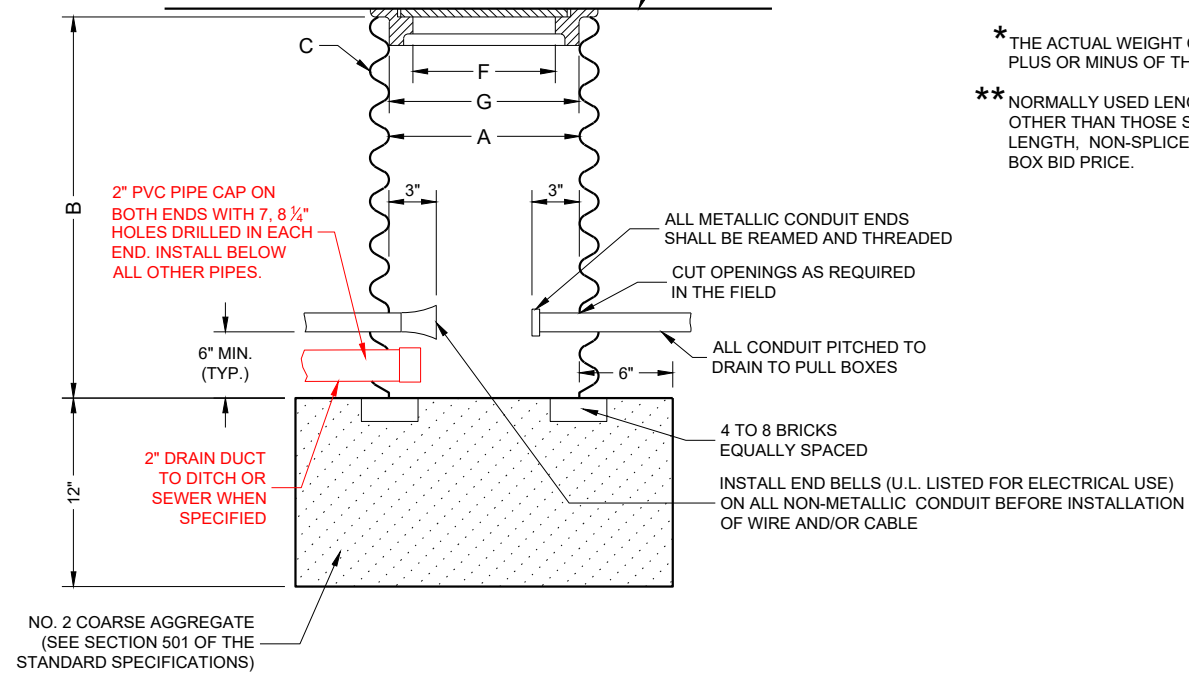
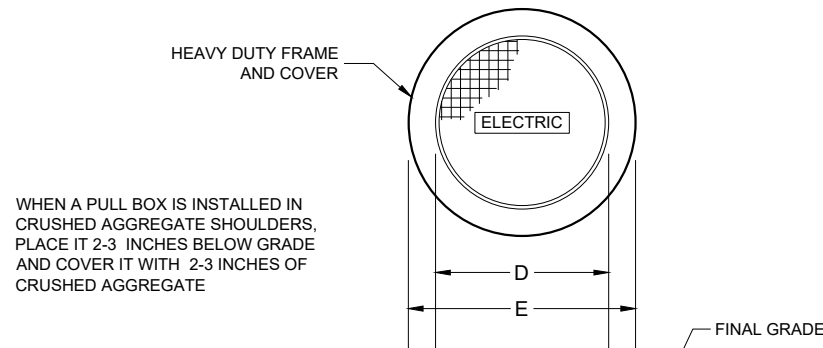
\*\* NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**



**PULL BOX**

**PULL BOX**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

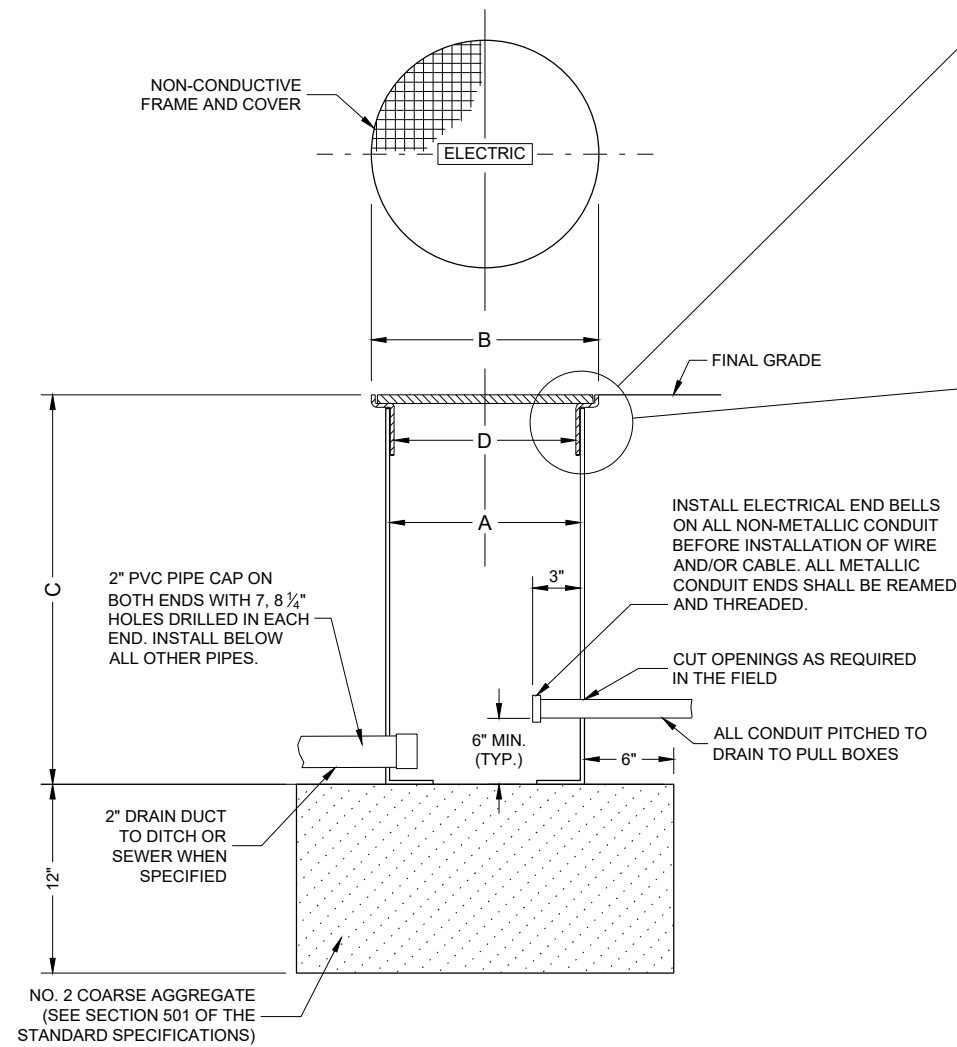
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

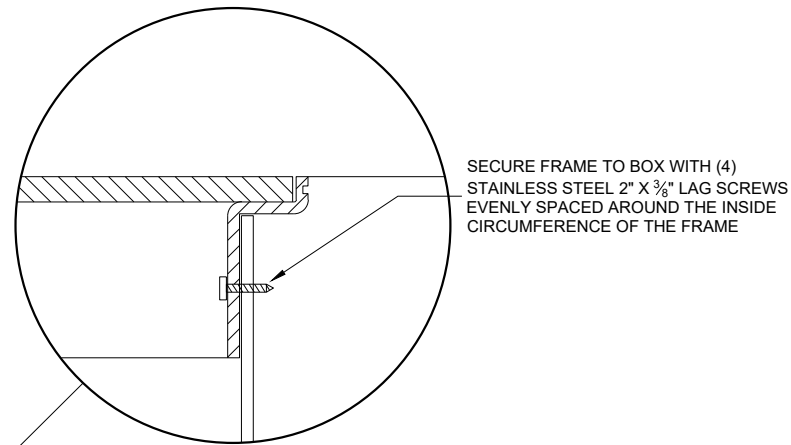
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

\* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

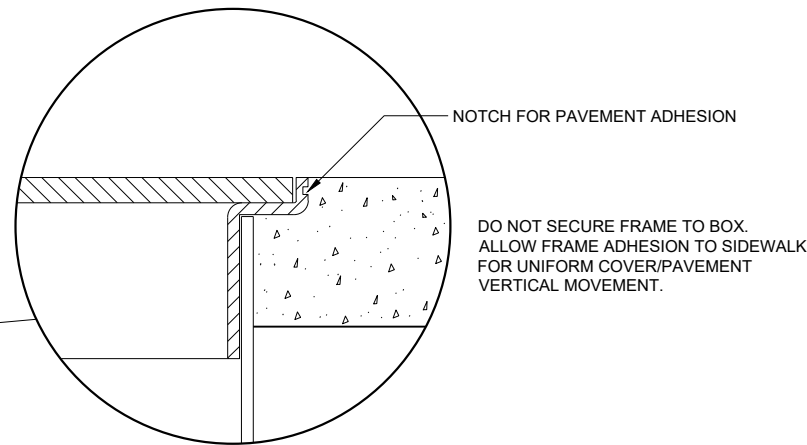
\*\* DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



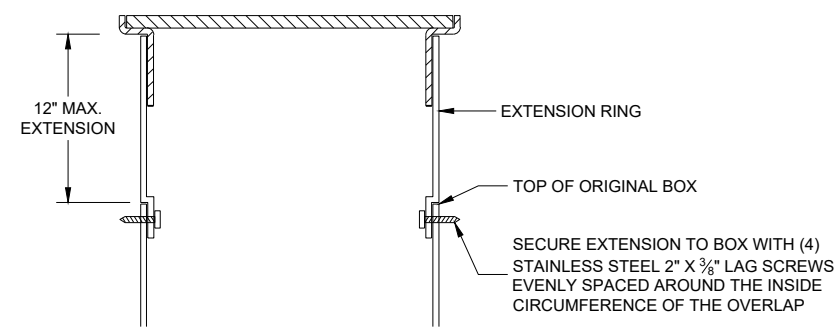
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

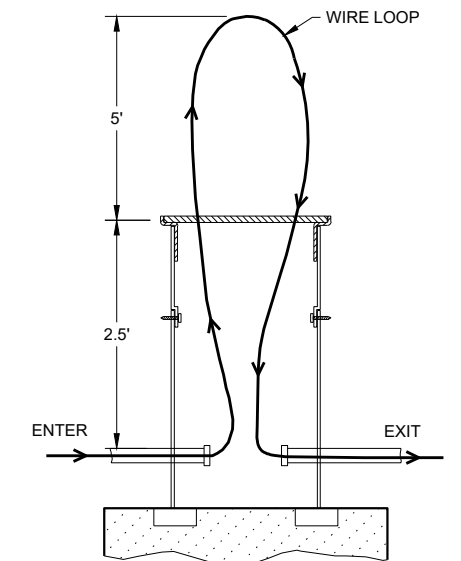
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

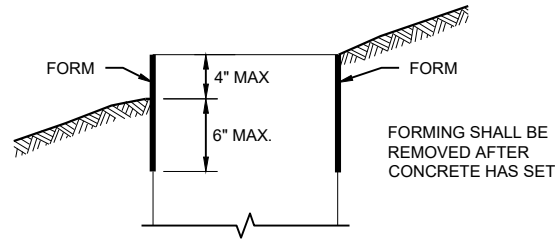
PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED May 2022 /S/ Ahmet Demirelek DATE STATE ELECTRICAL ENGINEER

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

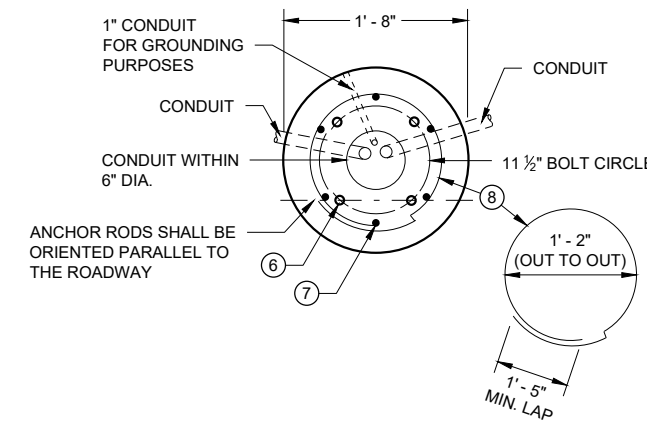
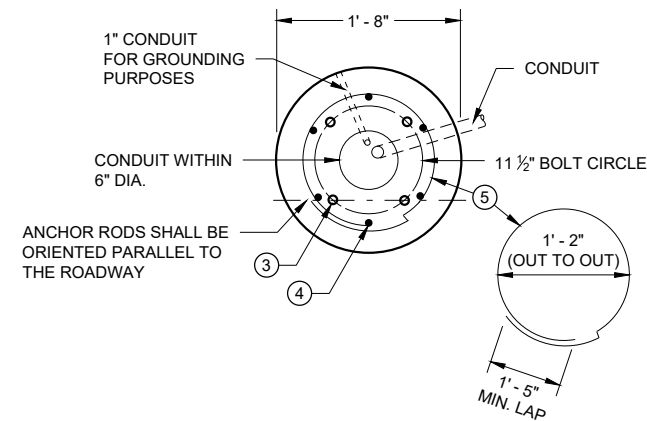
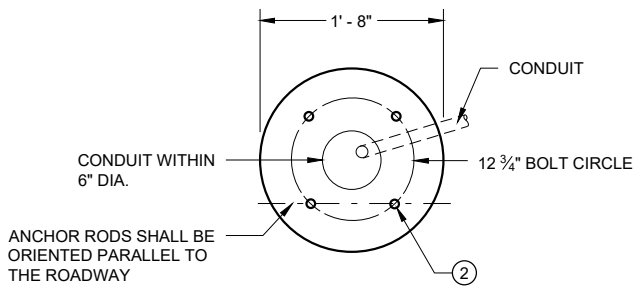
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

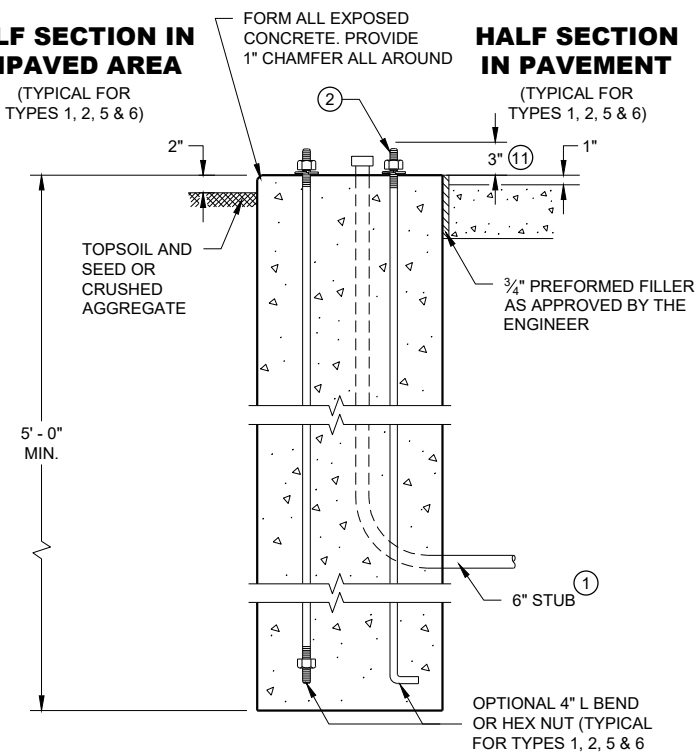
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

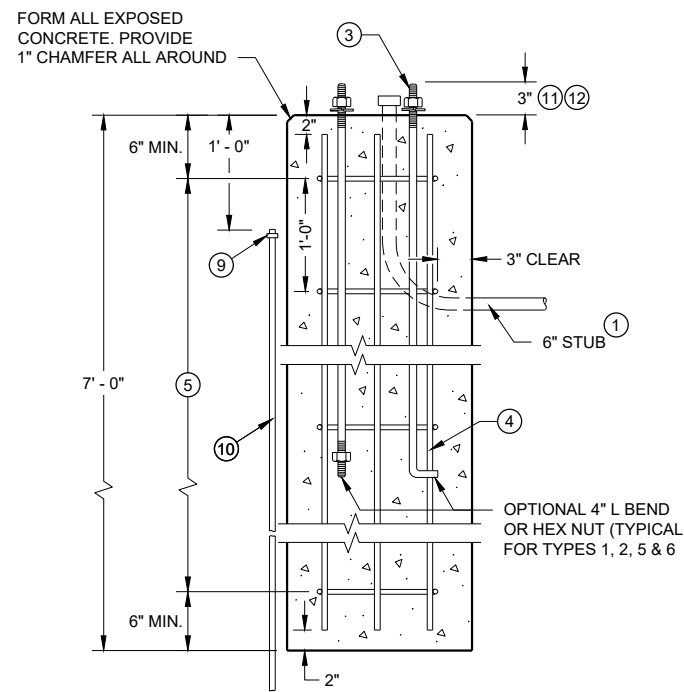


**HALF SECTION IN UNPAVED AREA**

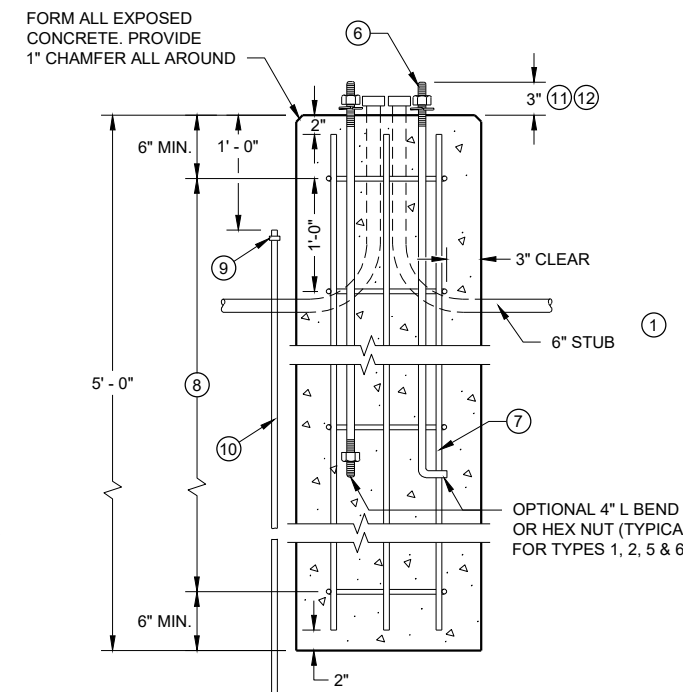


**TYPE 1**

**HALF SECTION IN PAVEMENT**



**TYPE 2**



**TYPE 5 & 6**

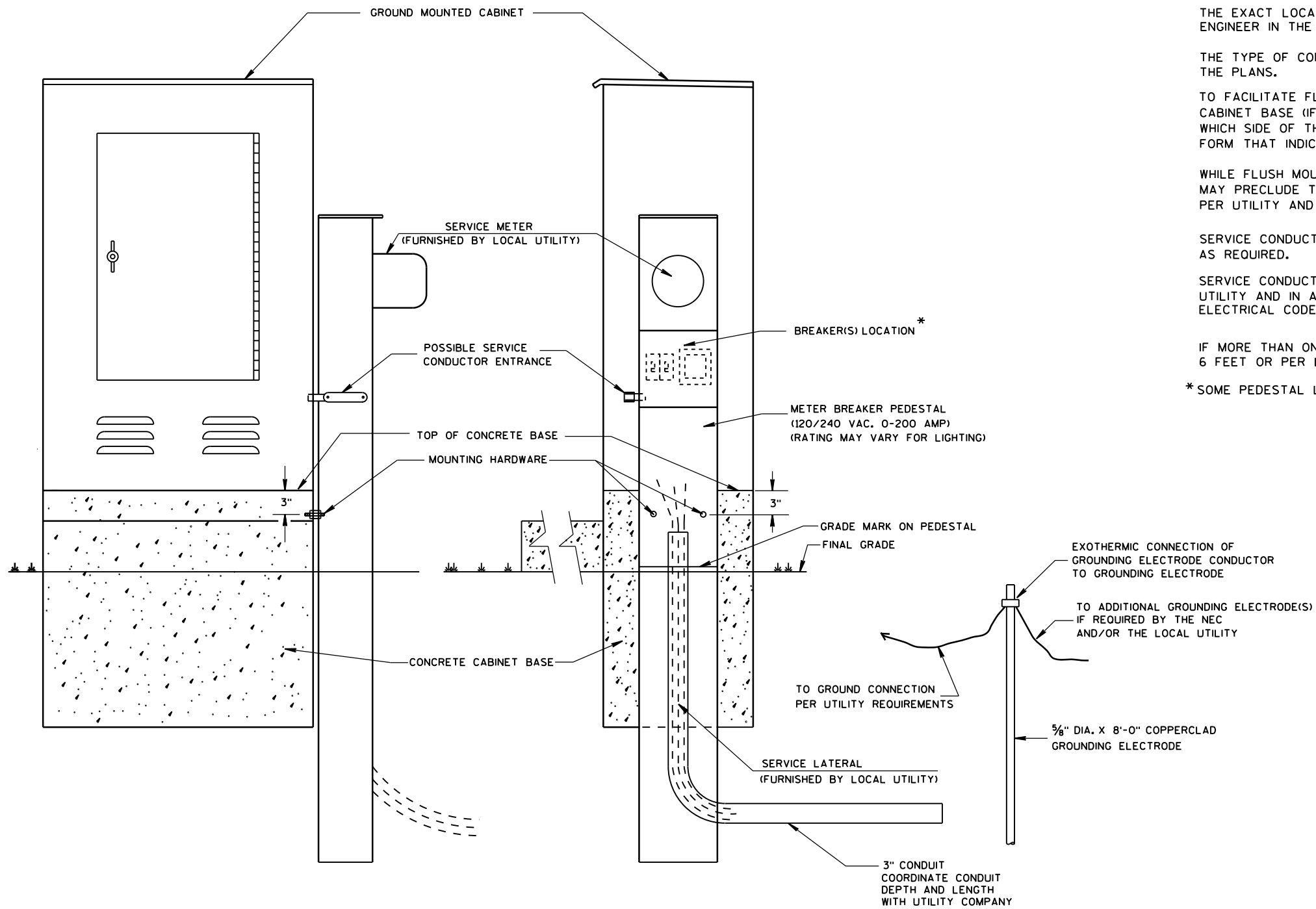
**CONCRETE BASES**

**CONCRETE BASES  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA



TYPICAL CABINET SERVICE INSTALLATION

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

\* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

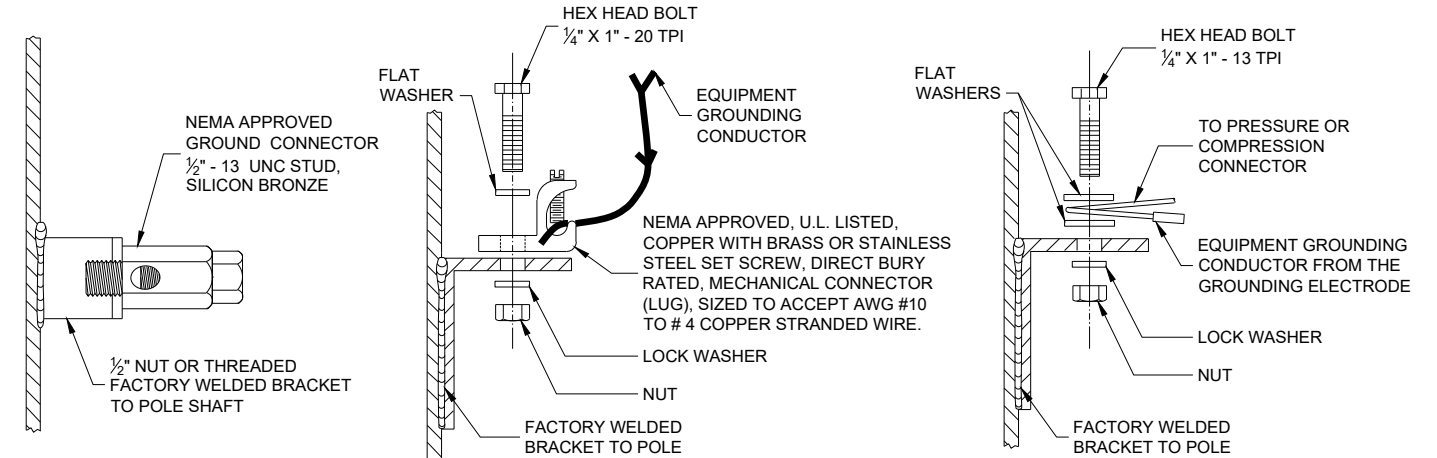
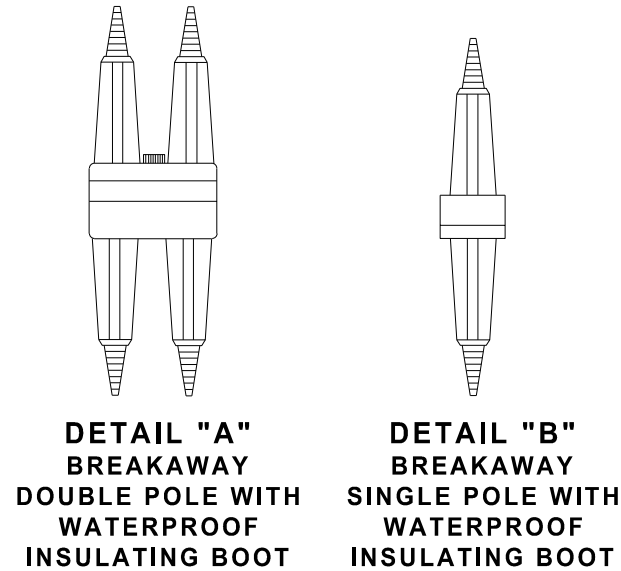
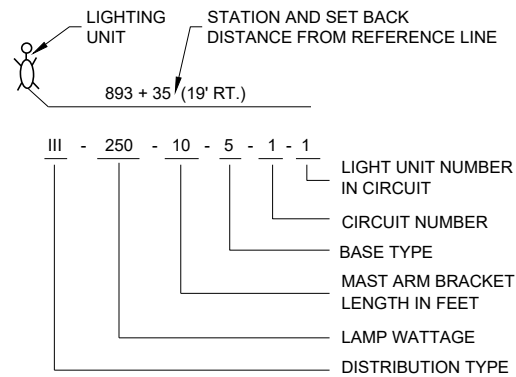
<b>CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

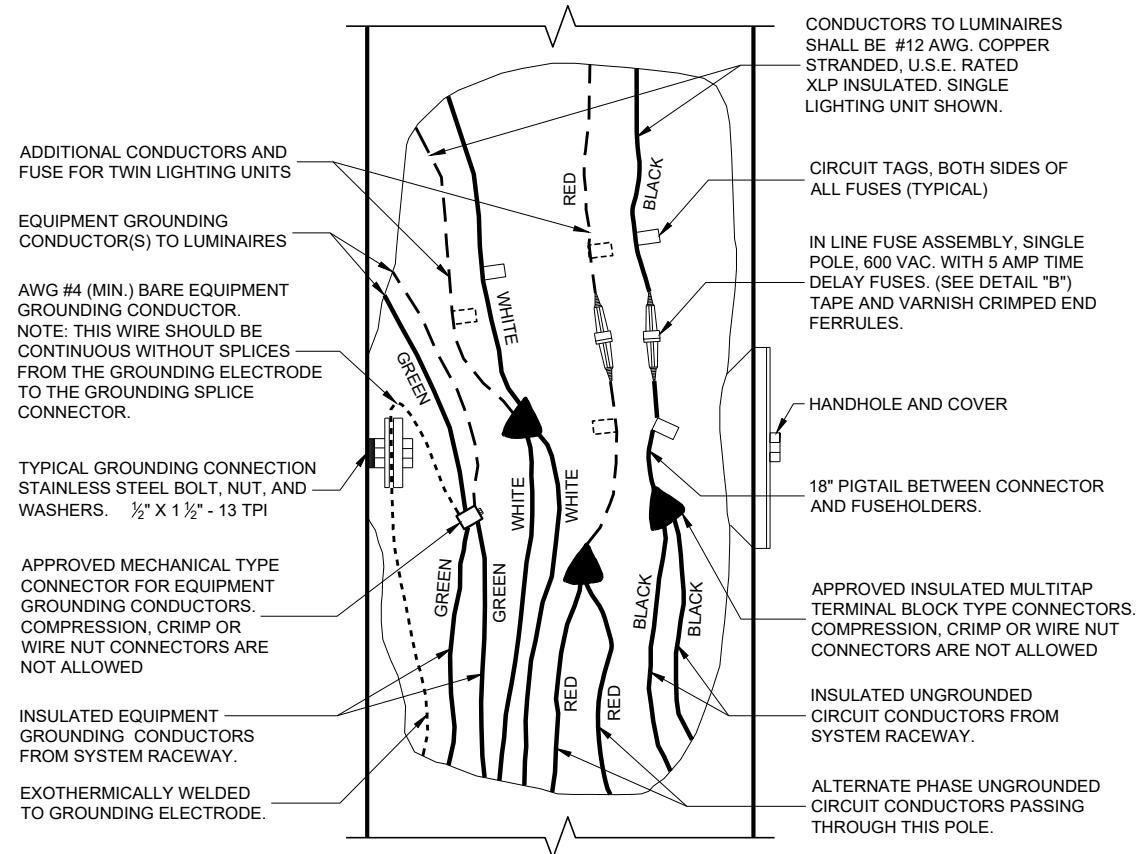
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

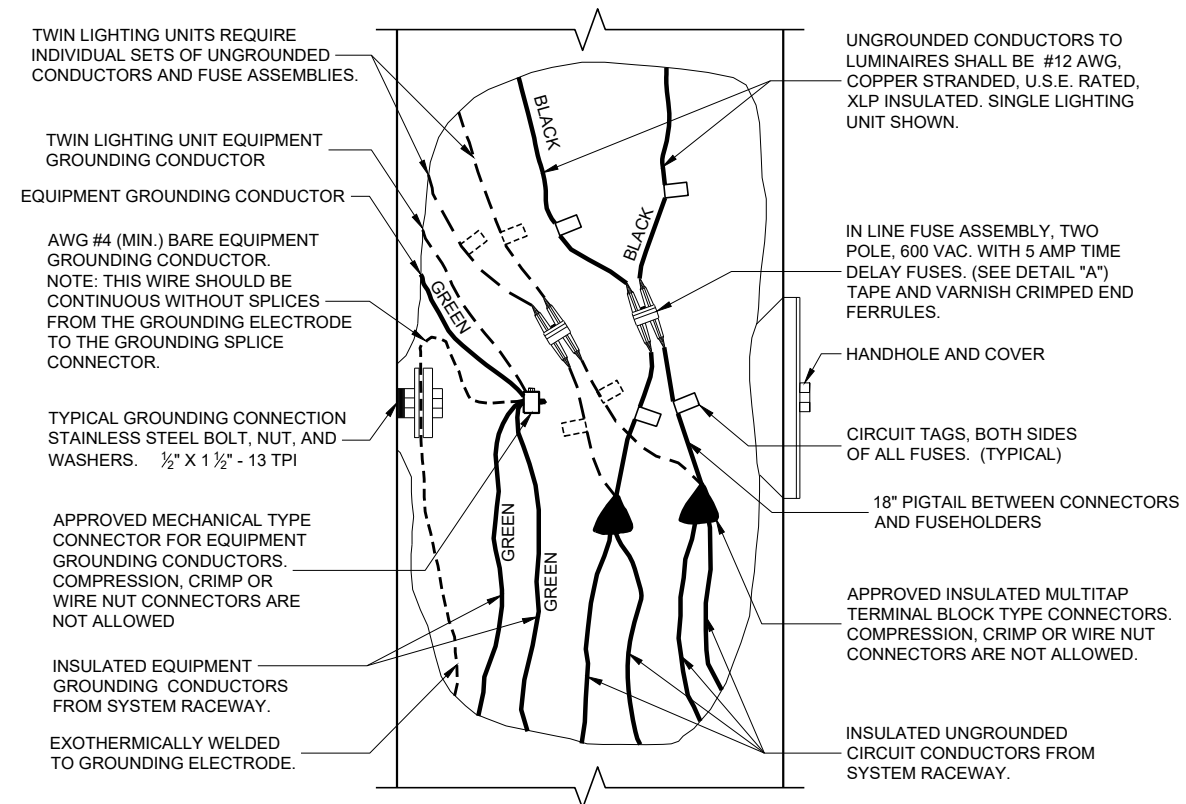


**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**LIGHTING UNIT CODE (TYPICAL)**



**3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR**



**2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

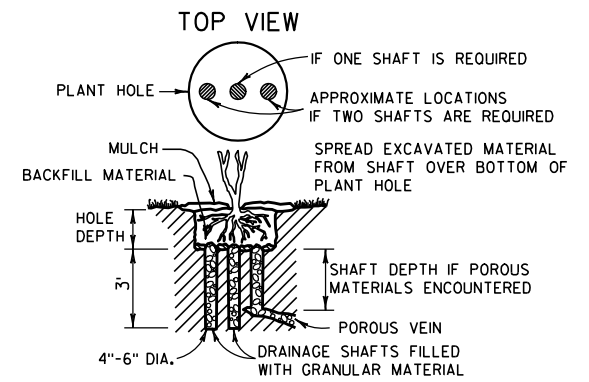
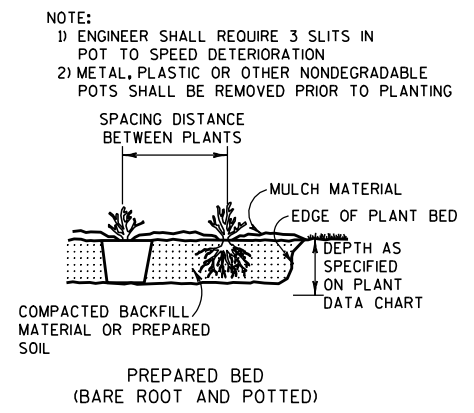
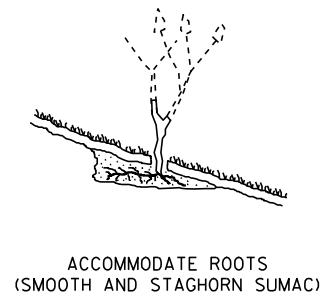
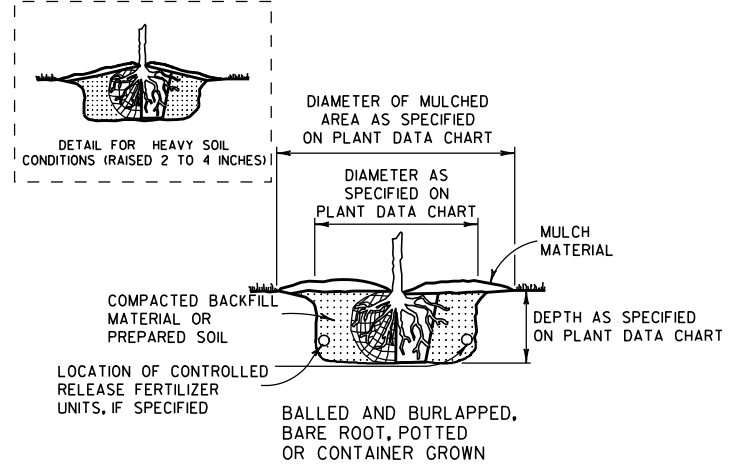
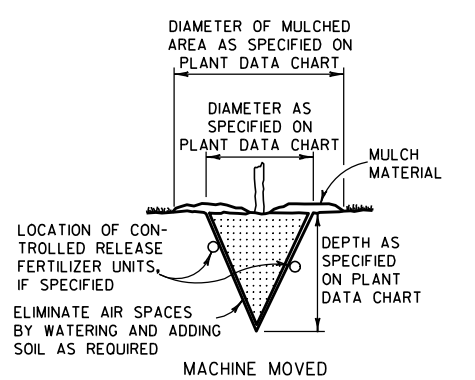
**NON - FREEWAY LIGHTING UNIT POLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA

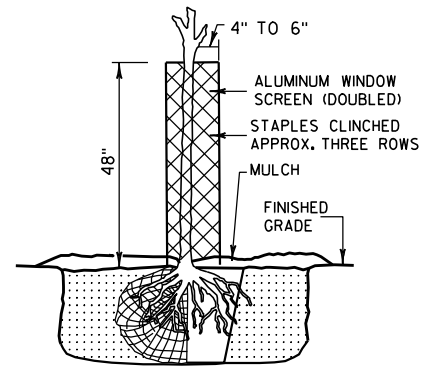
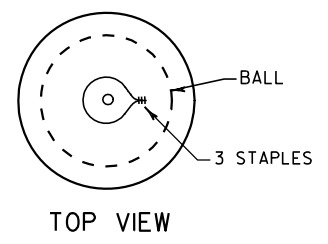
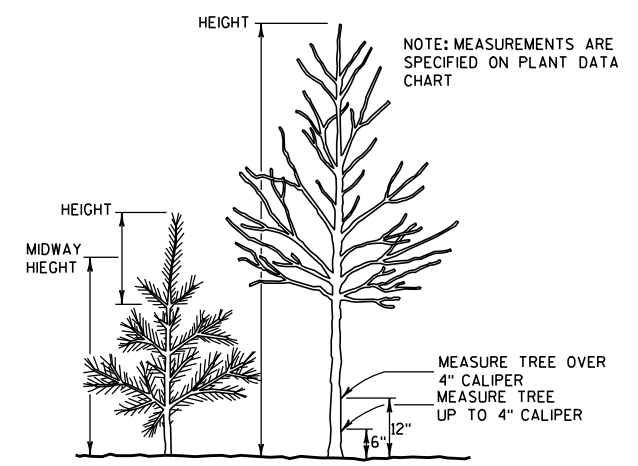




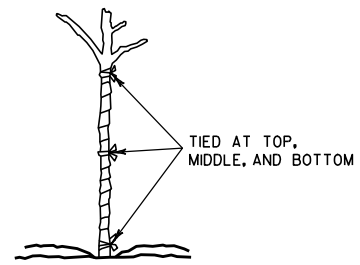
PLANTING

NOTE: DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

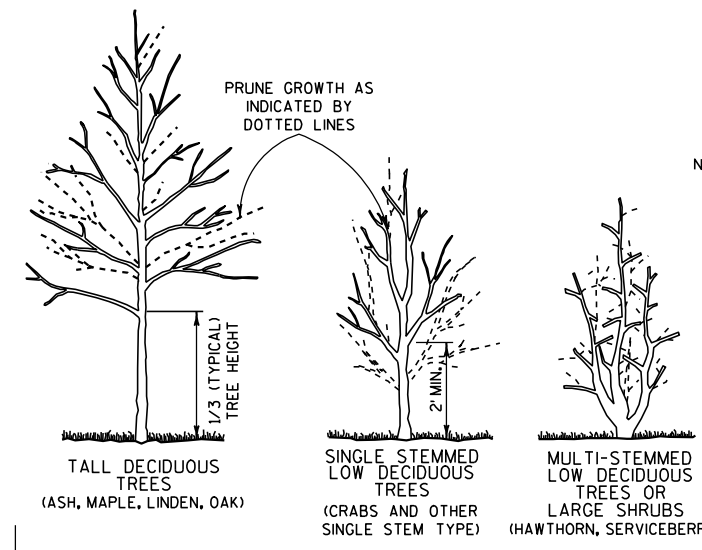
DRAINING



RODENT PROTECTION



WRAPPING

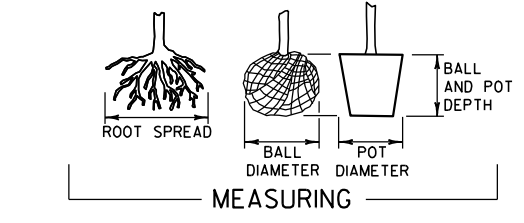


NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH  
 1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES  
 2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

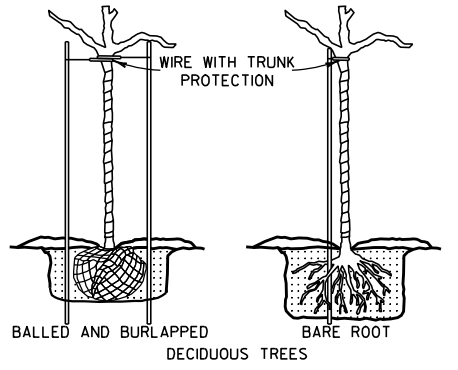
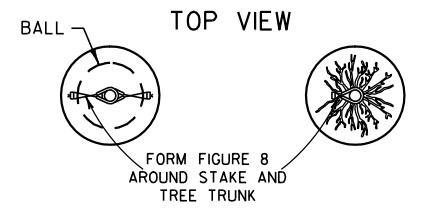
PRUNING

6

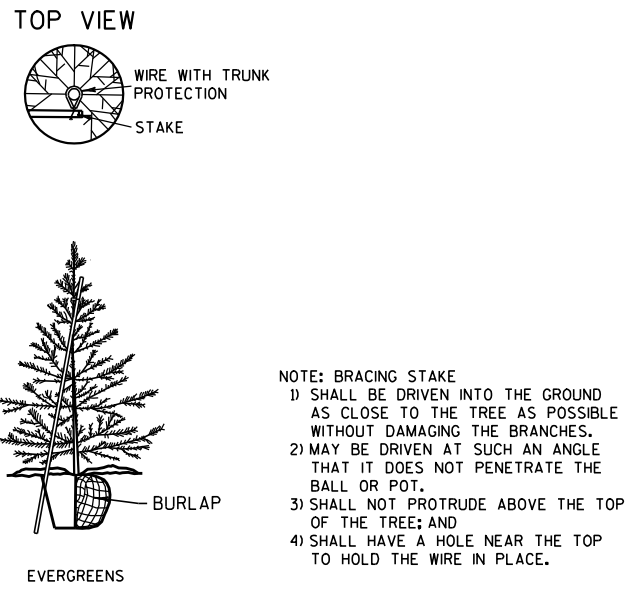
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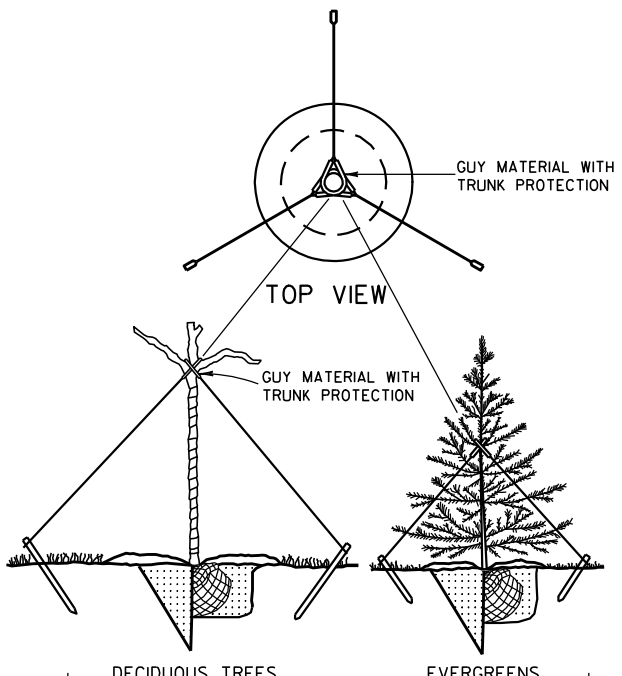
MEASURING



BRACING

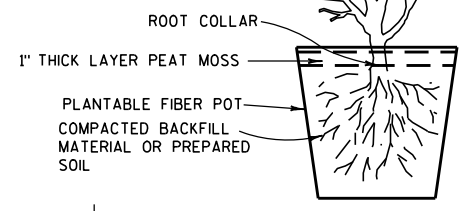


NOTE: BRACING STAKE  
 1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.  
 2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.  
 3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND  
 4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

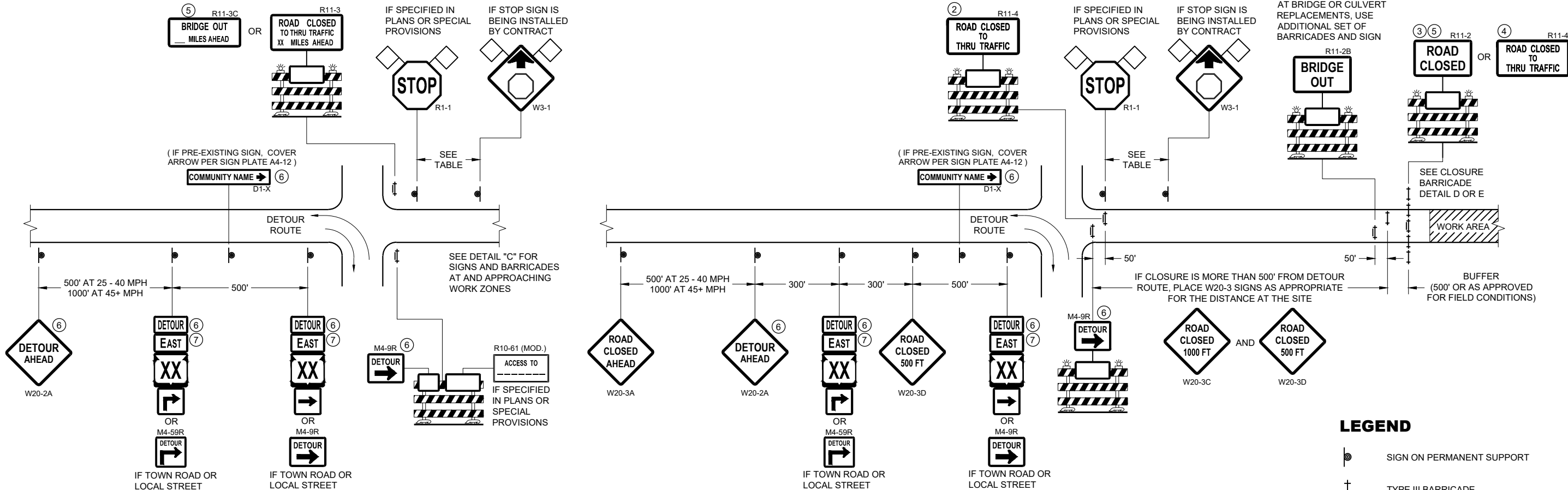
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 4/11/94 /s/ Rory L. Rhinesmith  
 DATE CHIEF METHODS DEVELOPMENT ENGINEER  
 FHWA



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

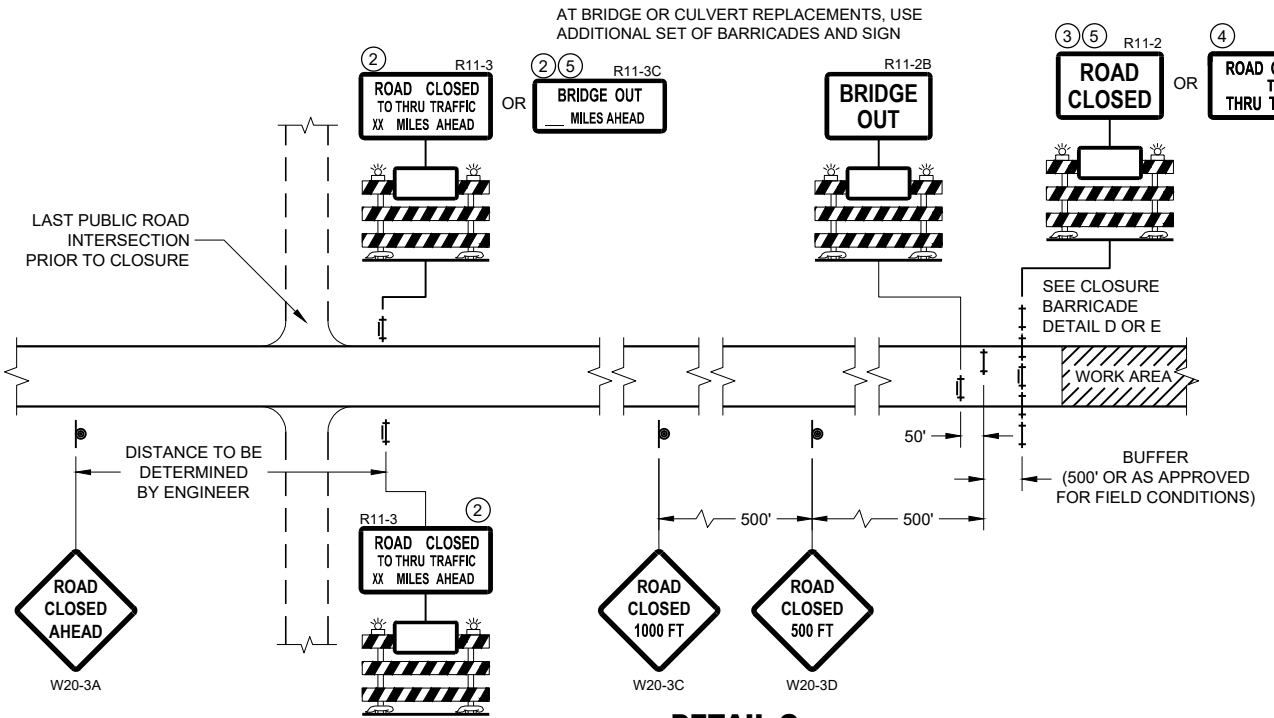
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



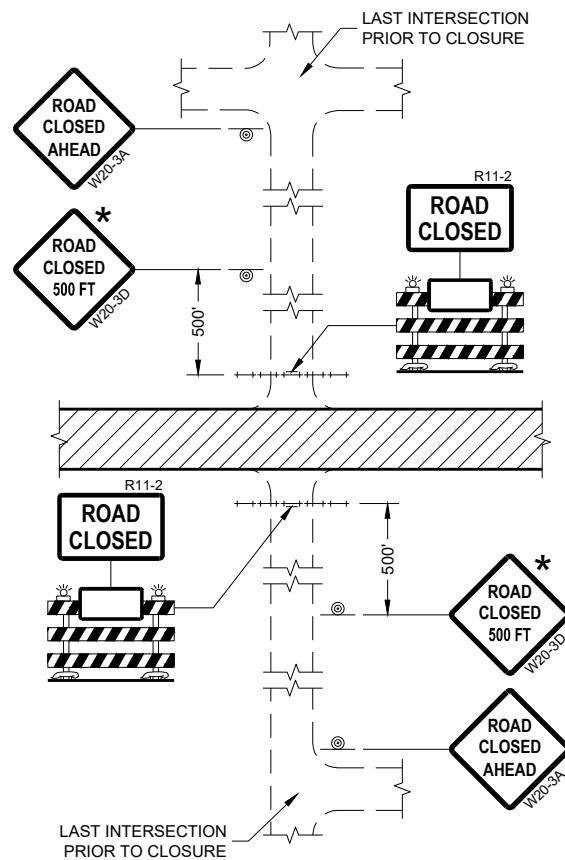
**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

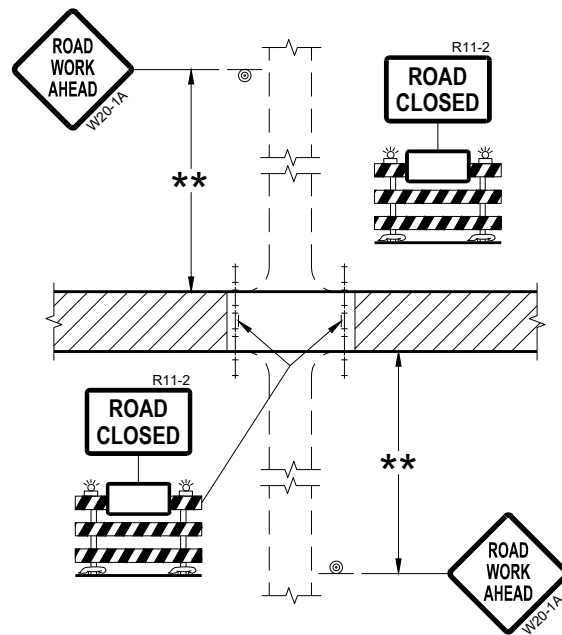
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

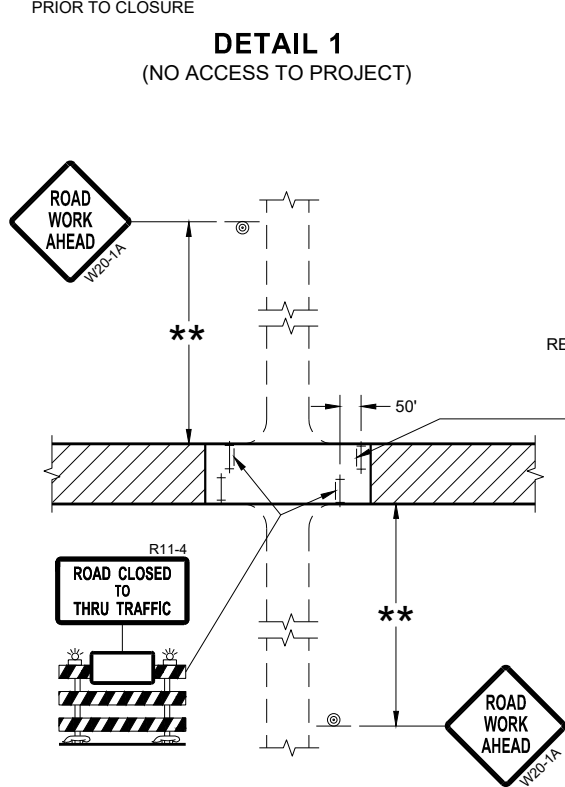
APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER  
FHWA



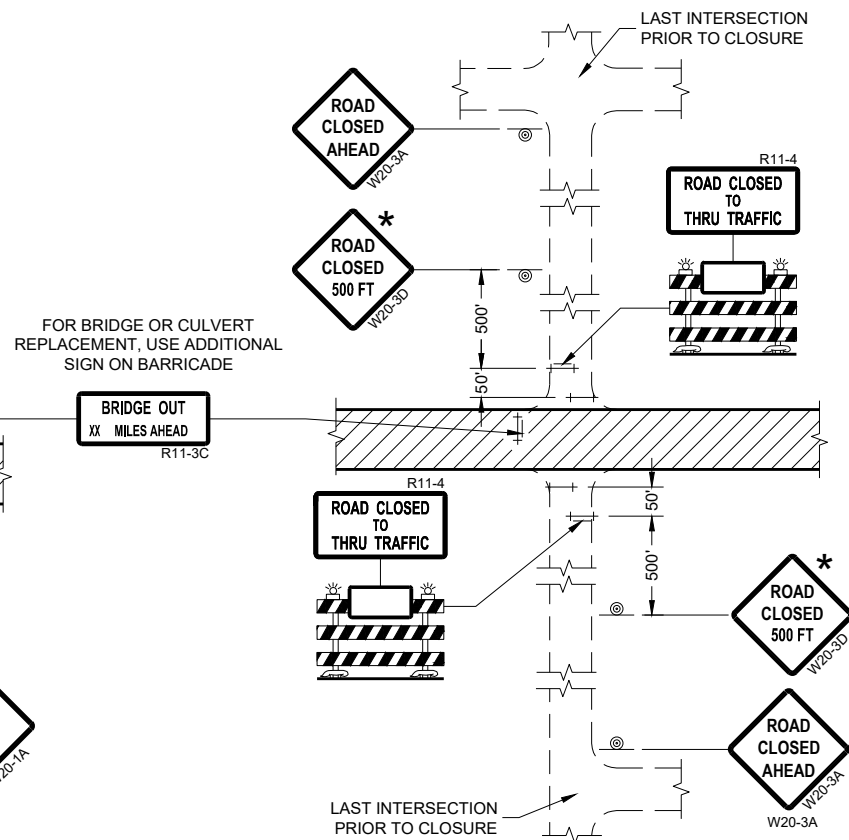
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

**GENERAL NOTES**

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

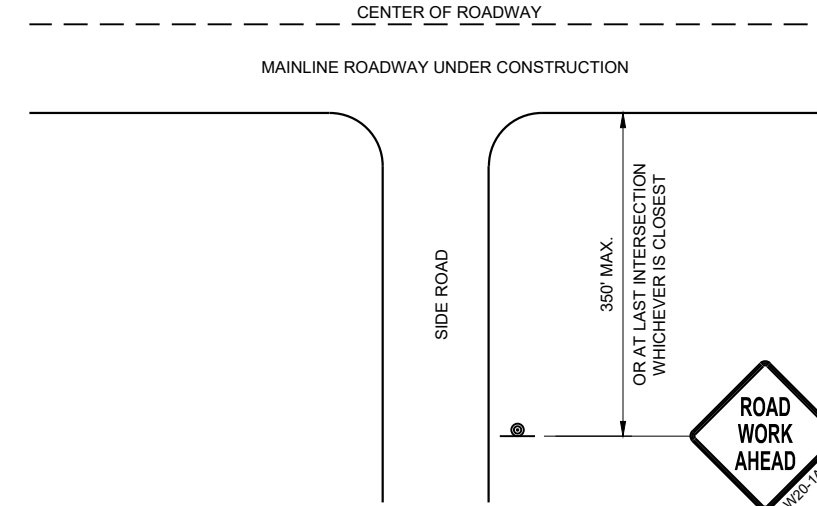
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

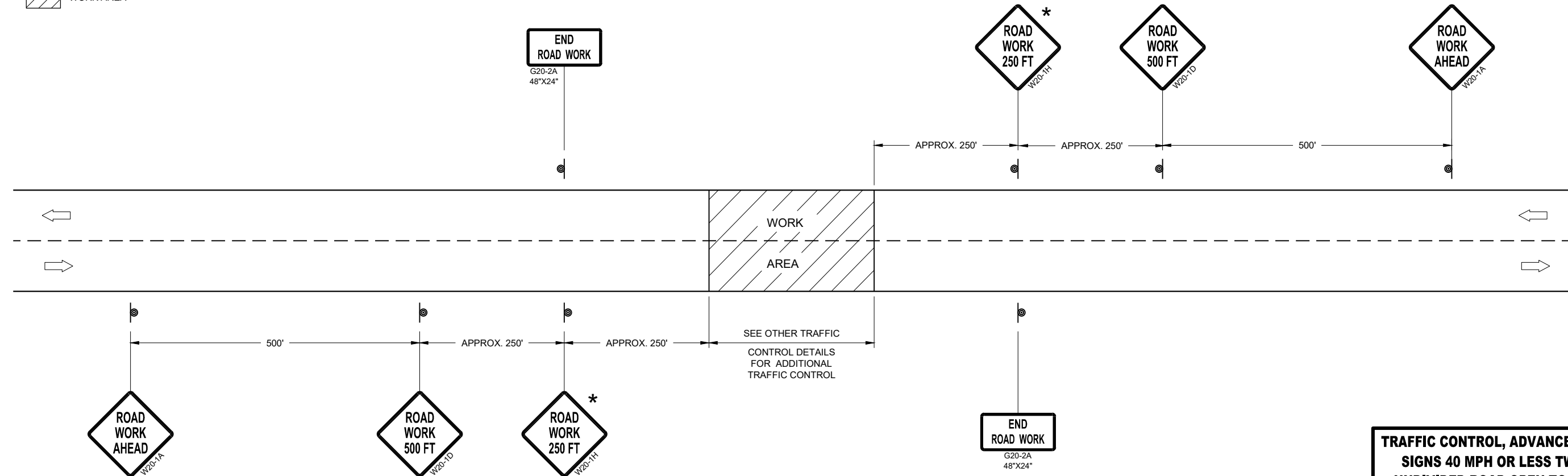
\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



**TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL**

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



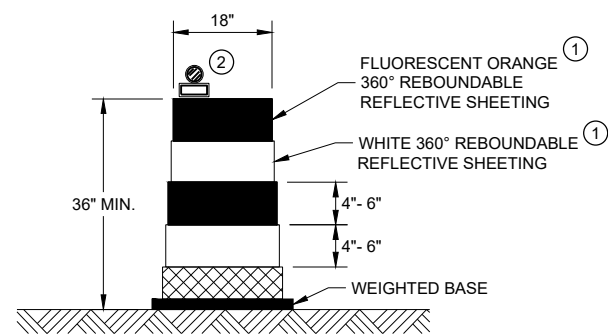
**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS**

**TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 40 MPH OR LESS TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC**

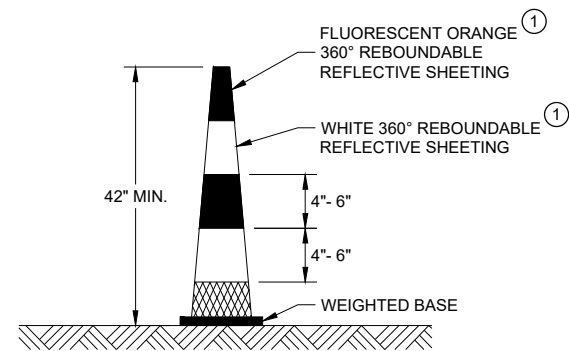
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

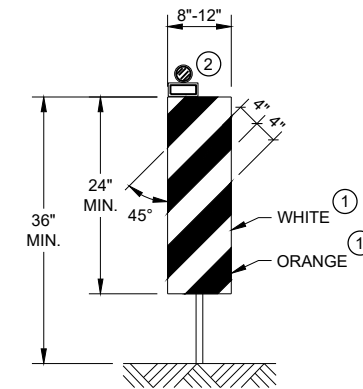


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
 1/2 SPACING OF DRUMS

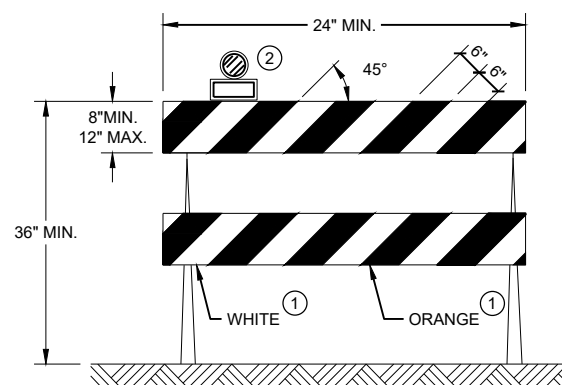


**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.

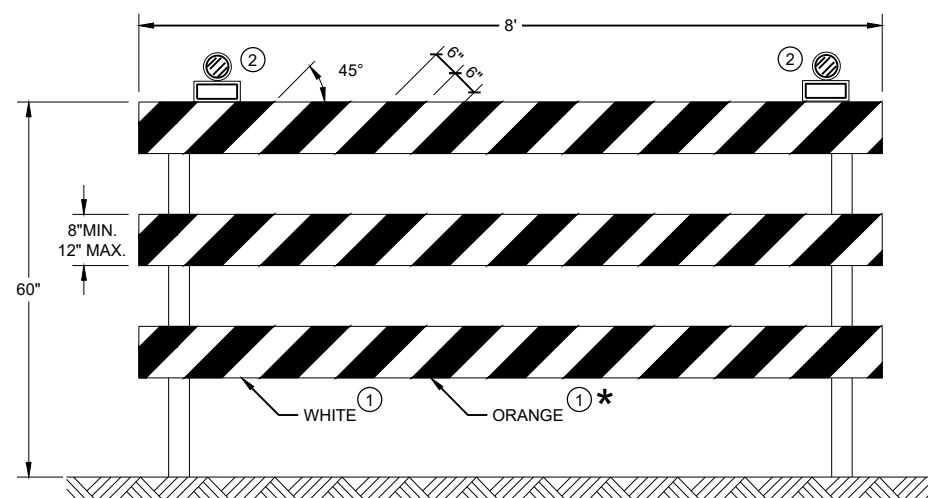
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

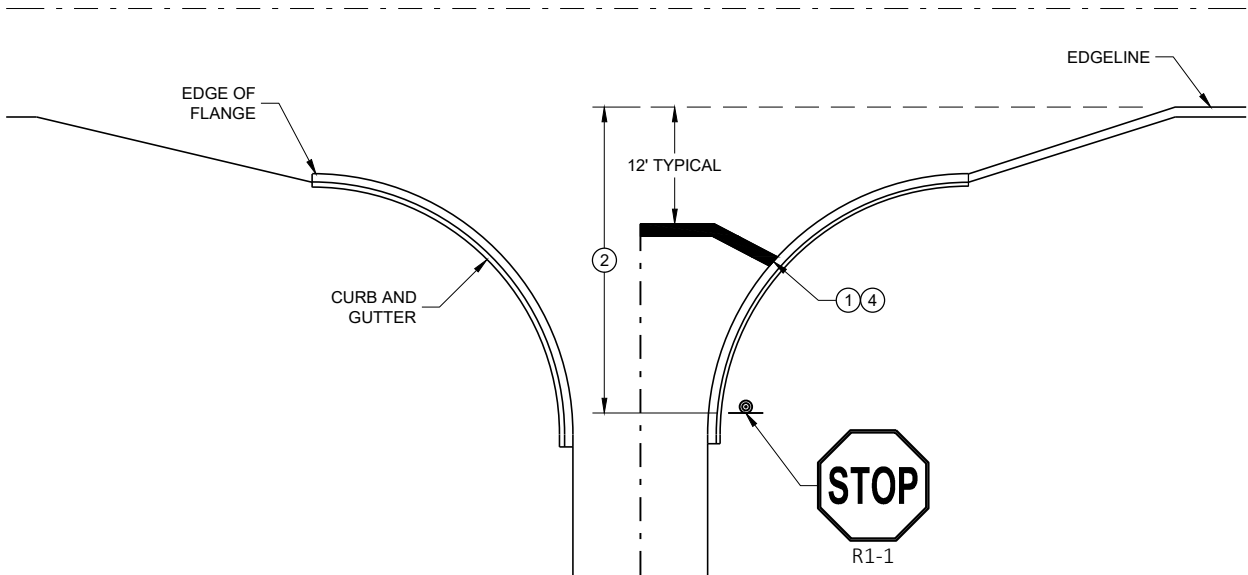
\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

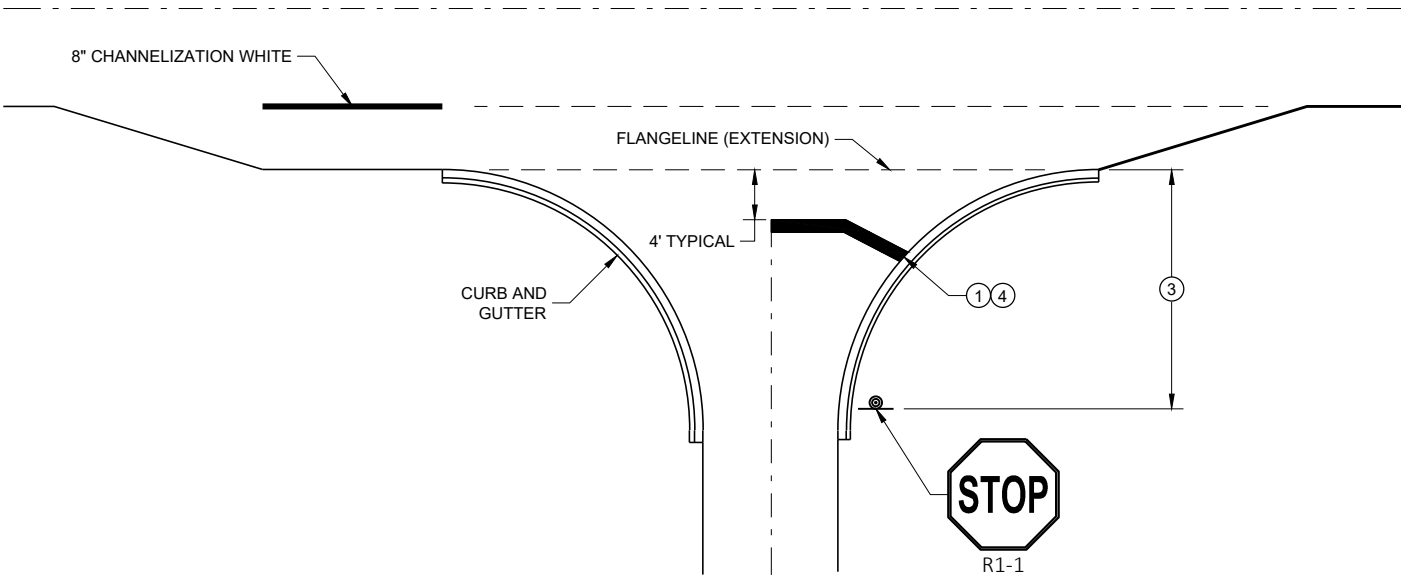
**GENERAL NOTES**

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

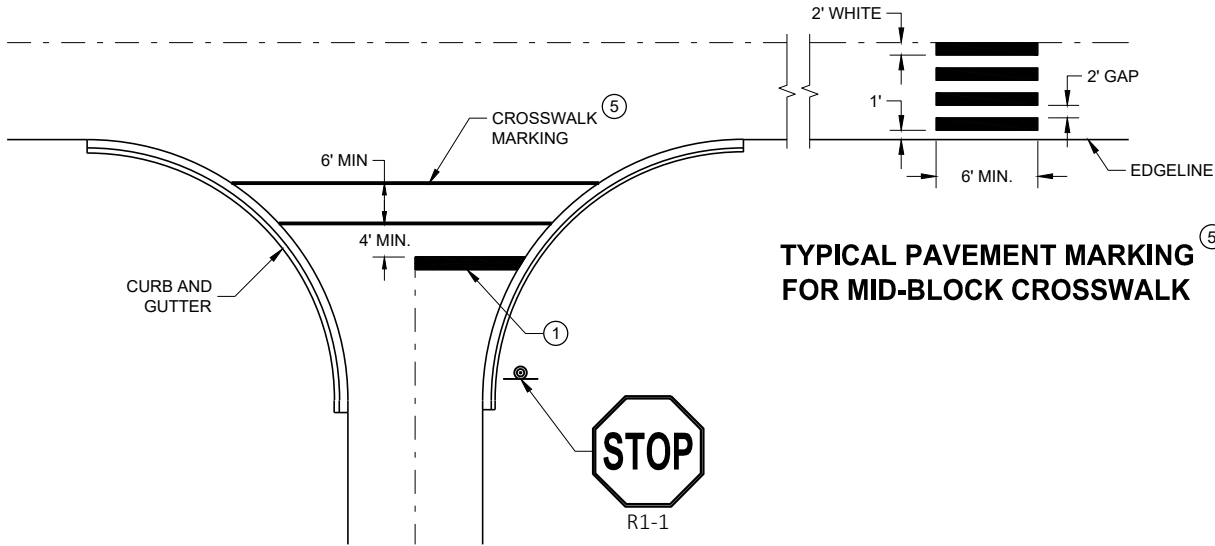
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

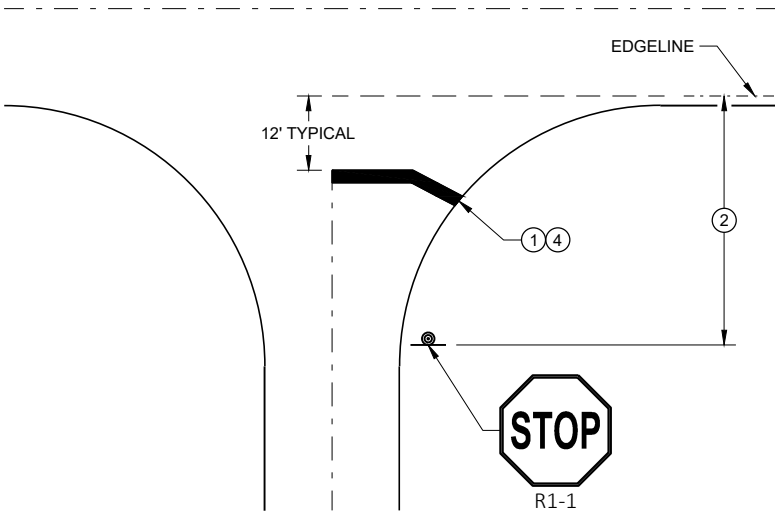


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**

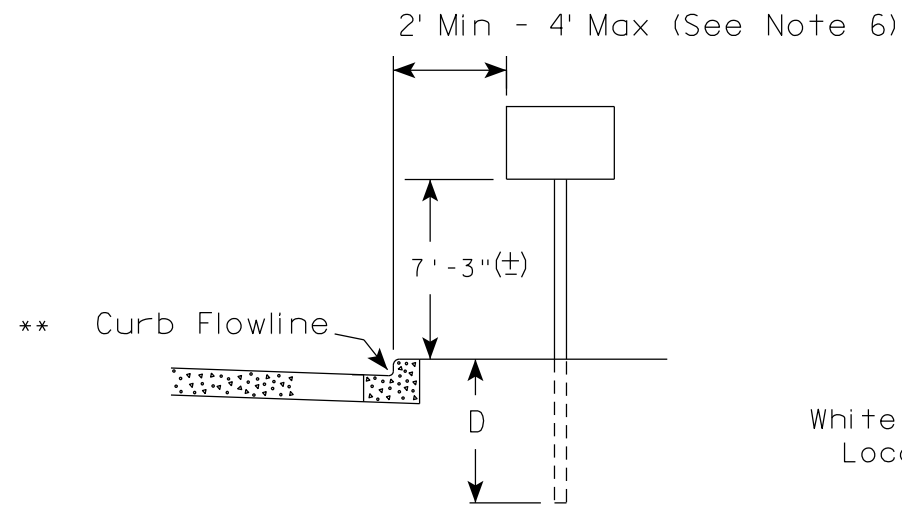
**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

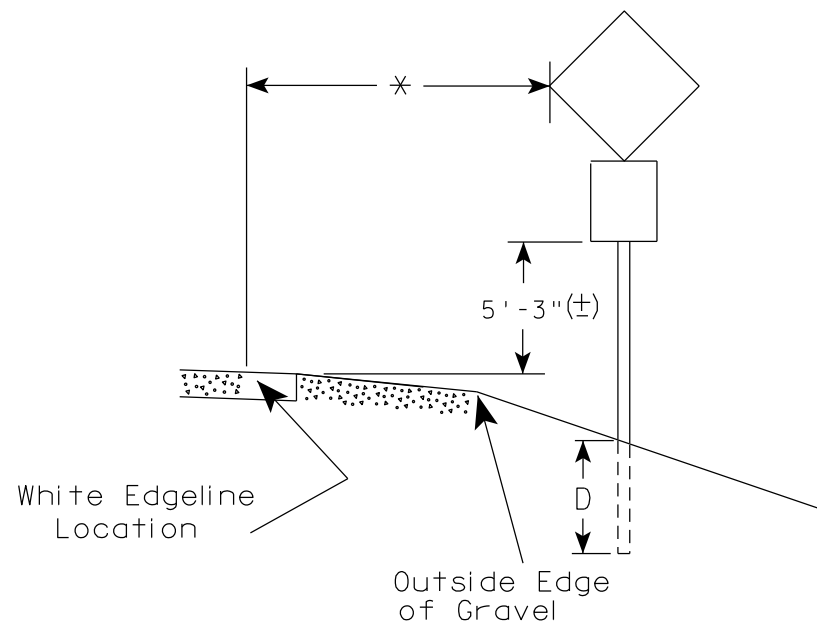
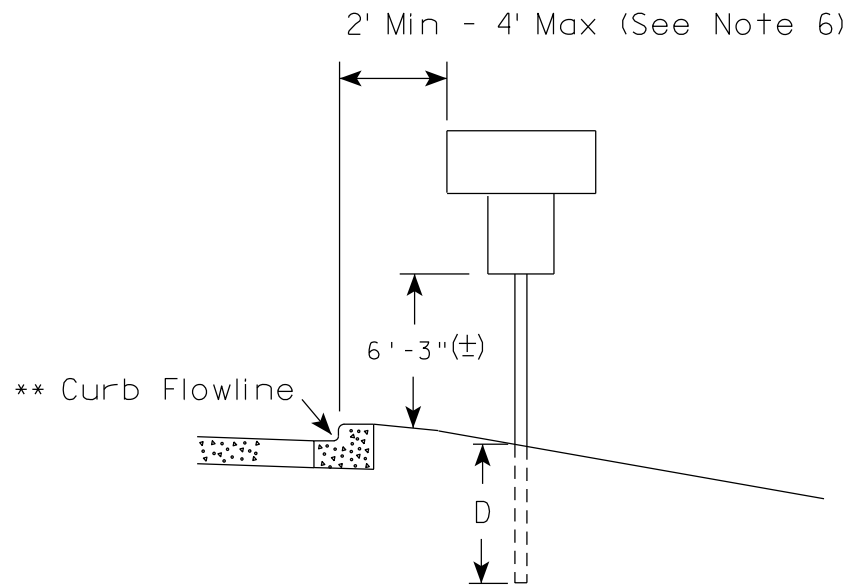
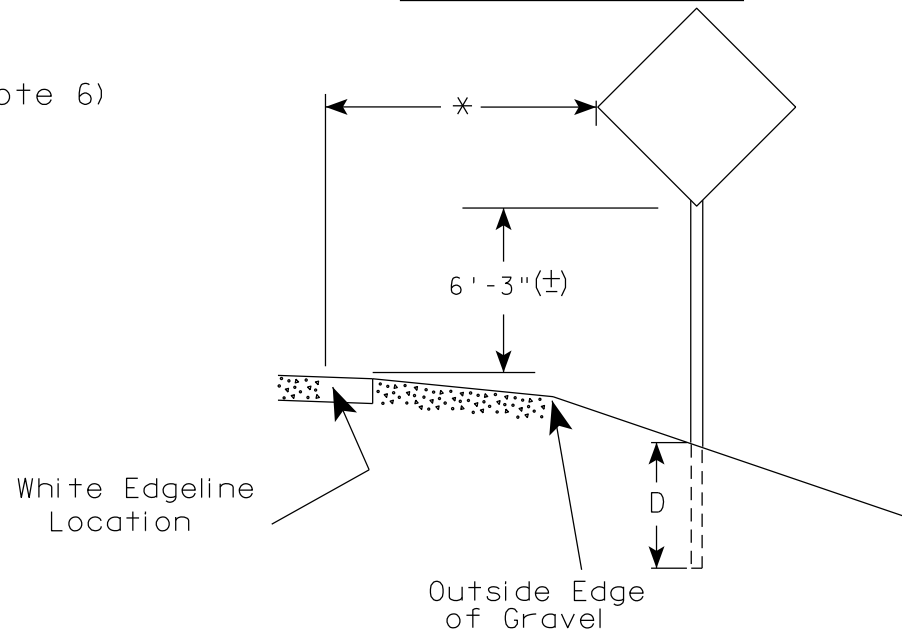
APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

7

7

\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

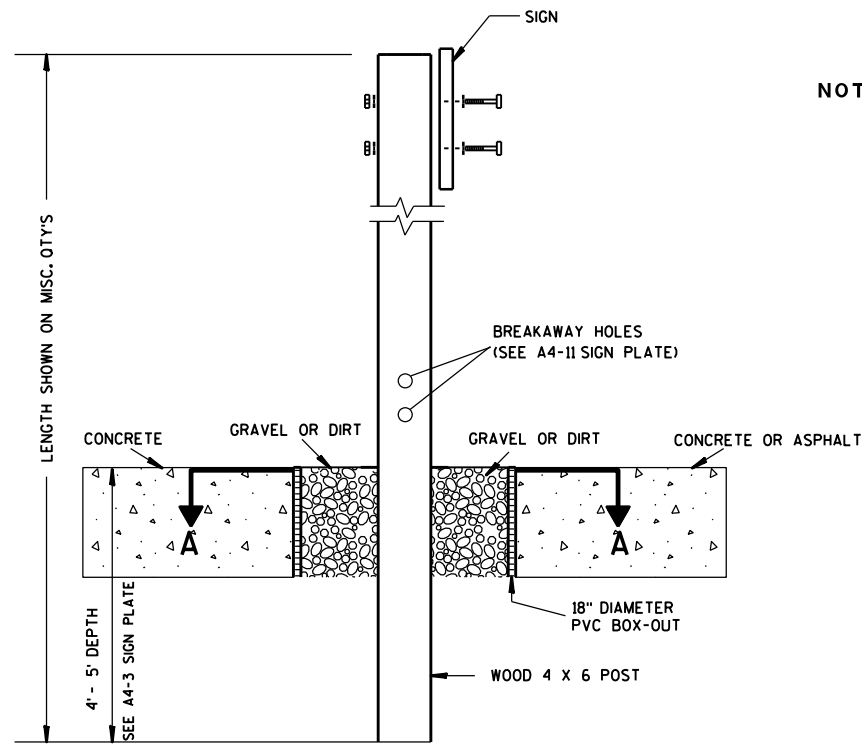
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

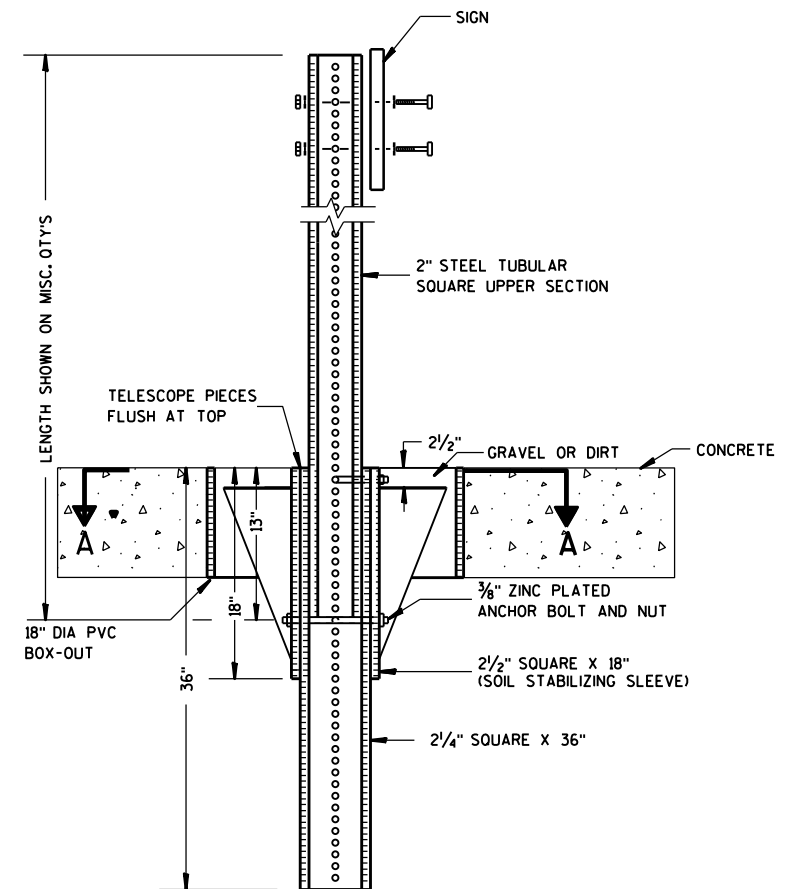
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

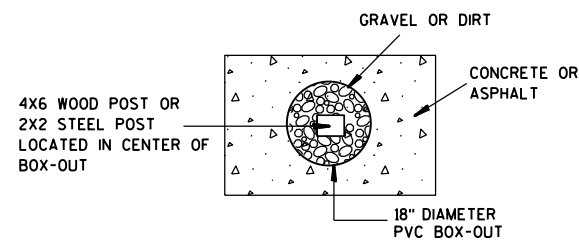
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

**SIGN POST  
BOX-OUTS  
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

7

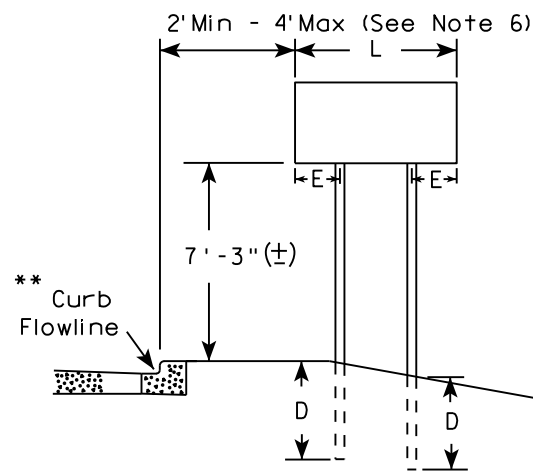
7



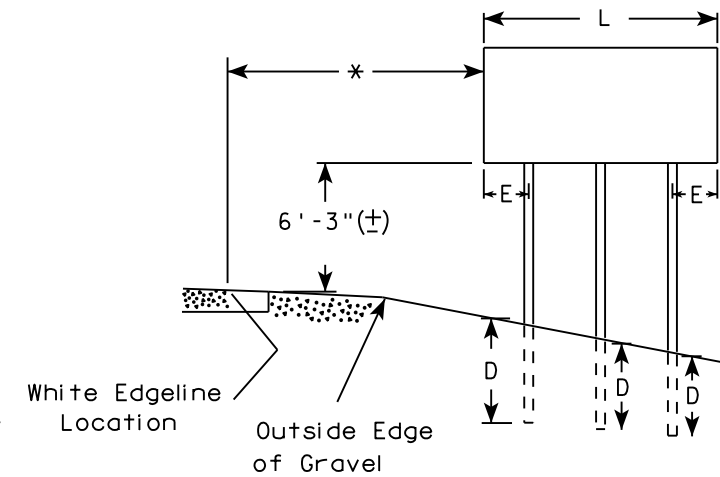
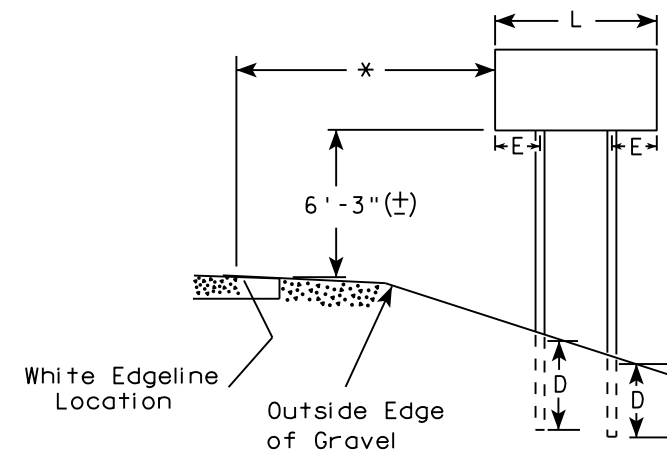
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

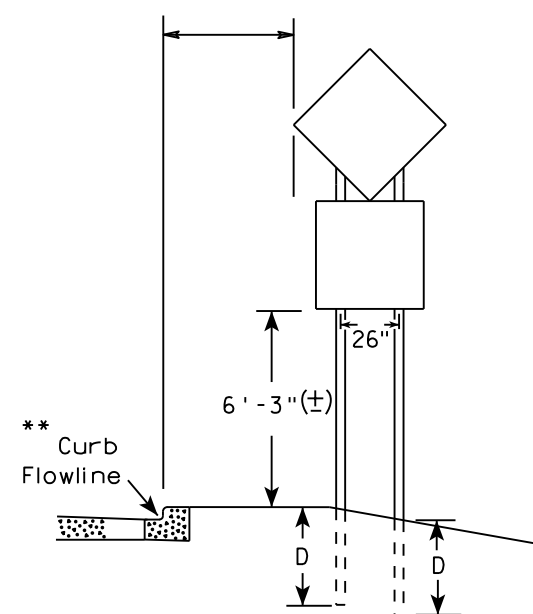
URBAN AREA



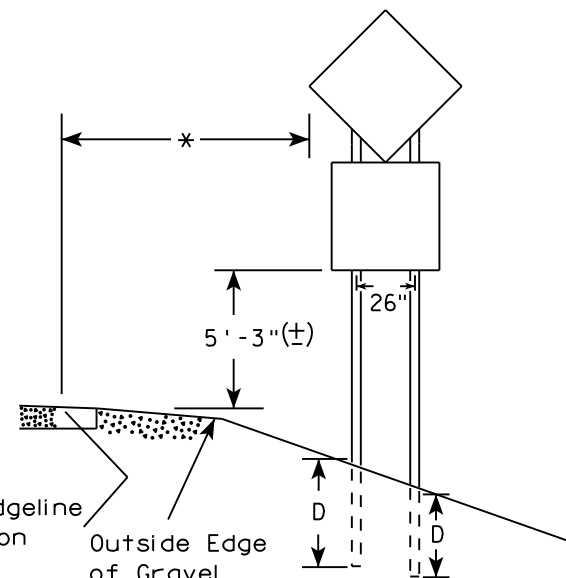
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

\*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

\*\*\*

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

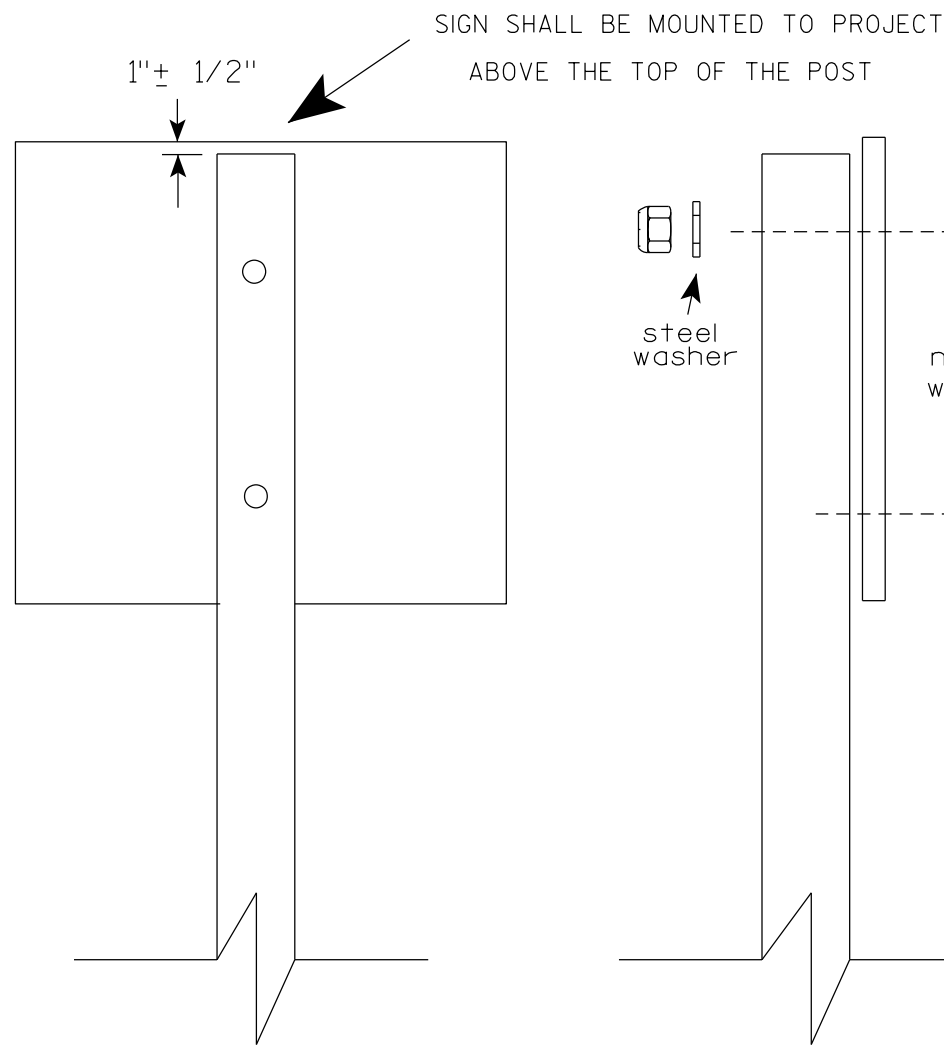
Area of Sign Installation ( Sq. Ft. )	D ( Min )
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

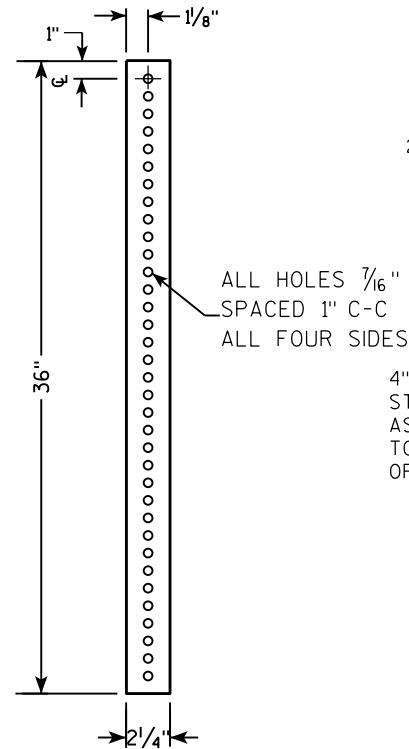
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
 O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

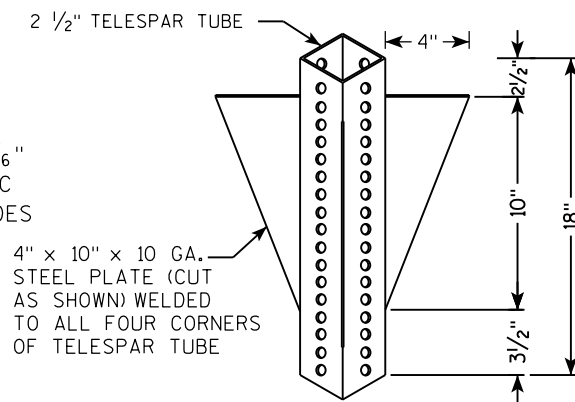
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

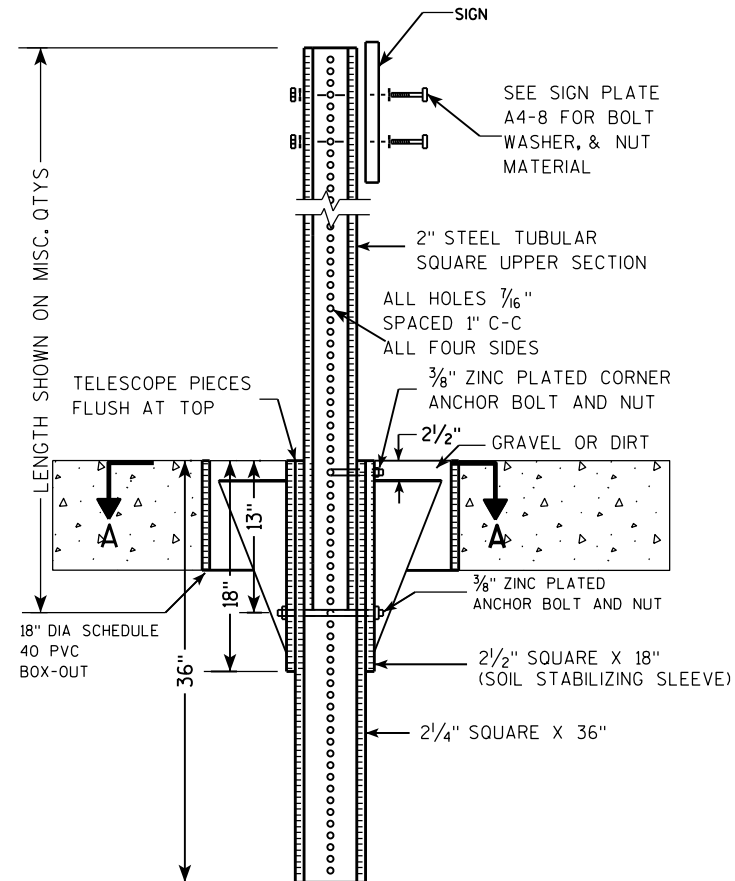
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



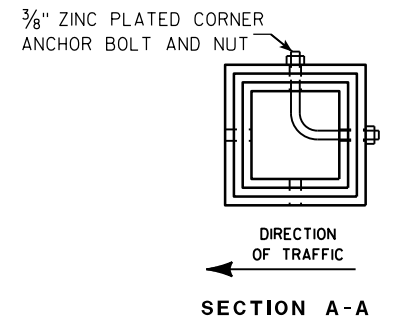
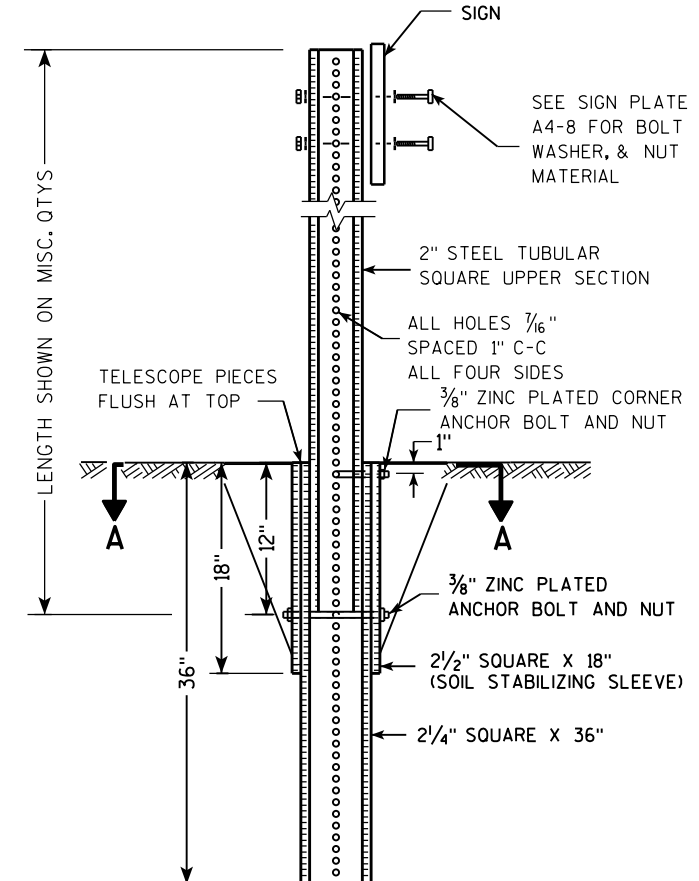
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST  
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

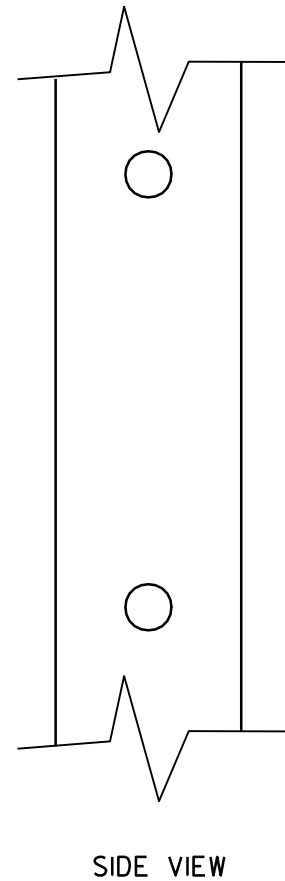
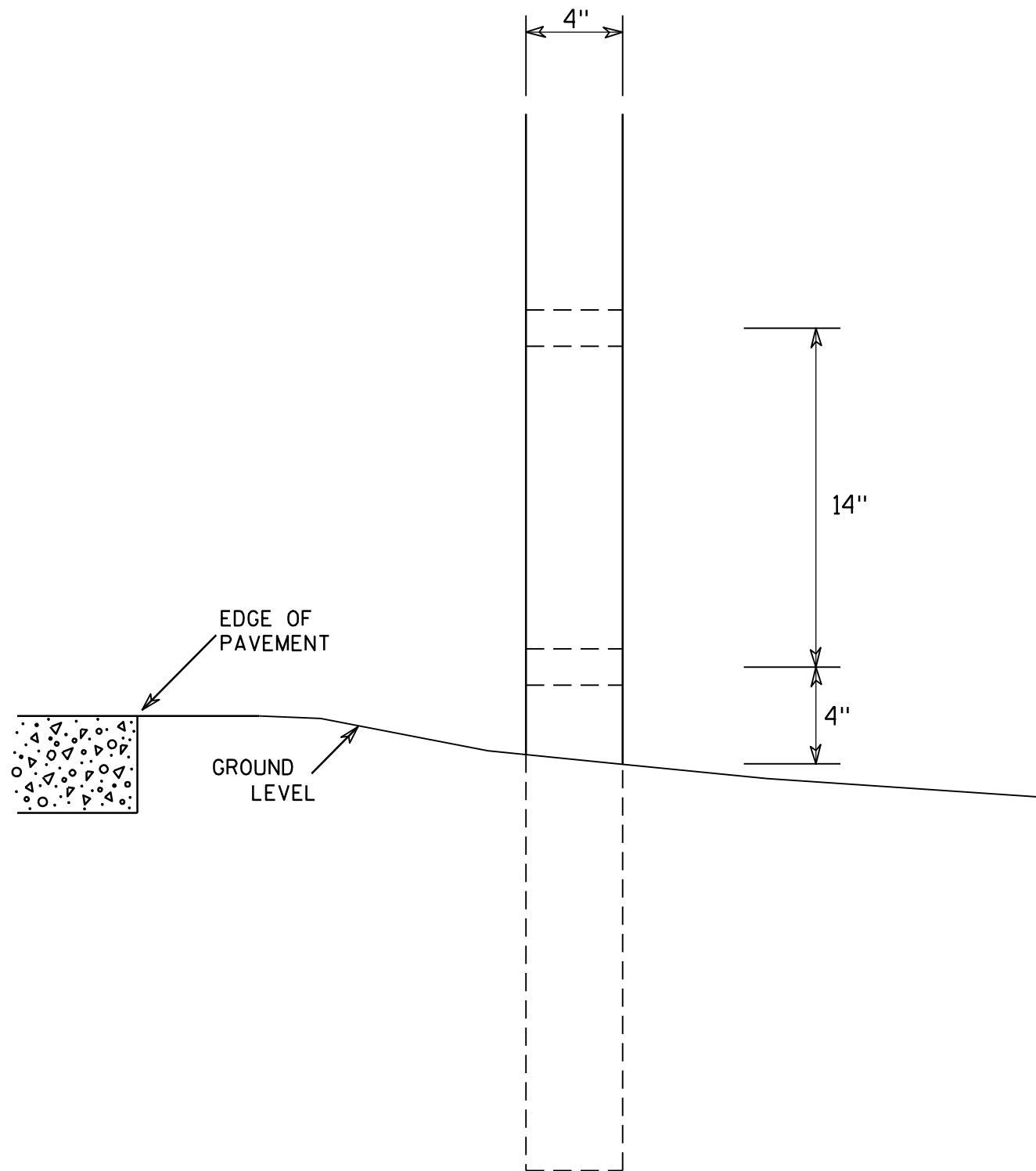
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

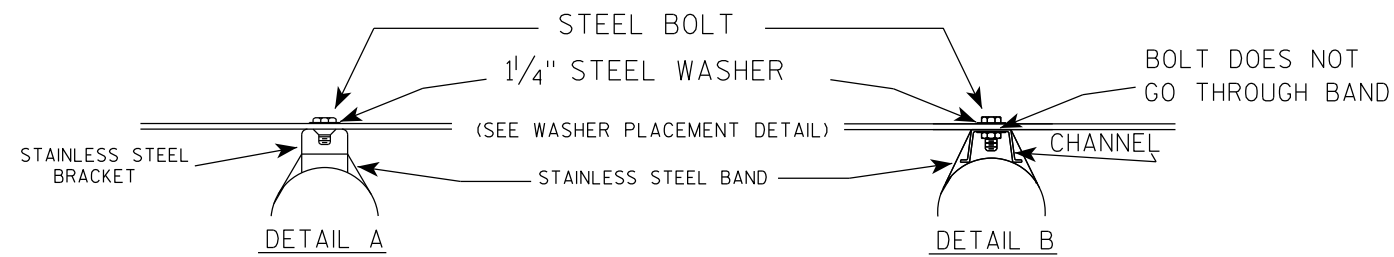
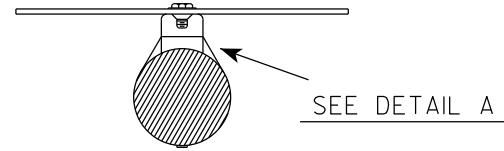
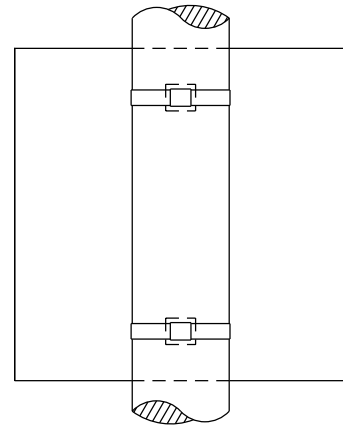
7

7

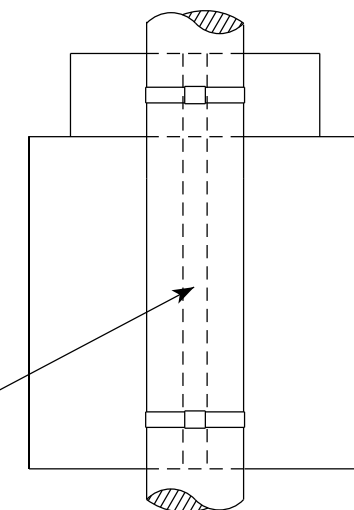
<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

SINGLE SIGN



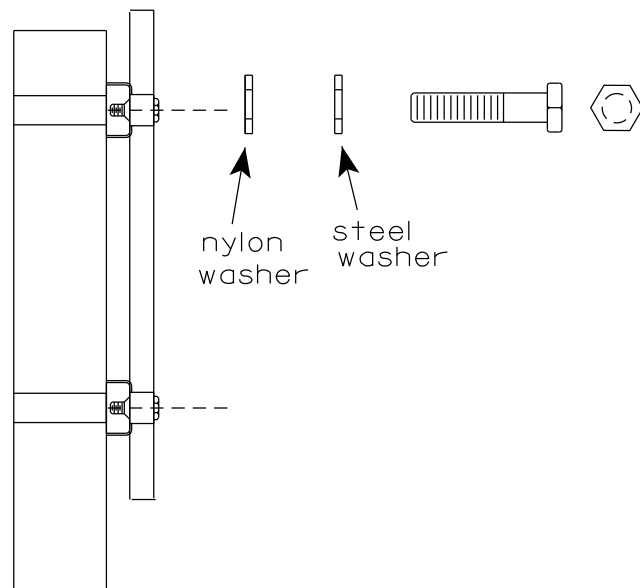
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



WASHER PLACEMENT



WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

## GENERAL NOTES

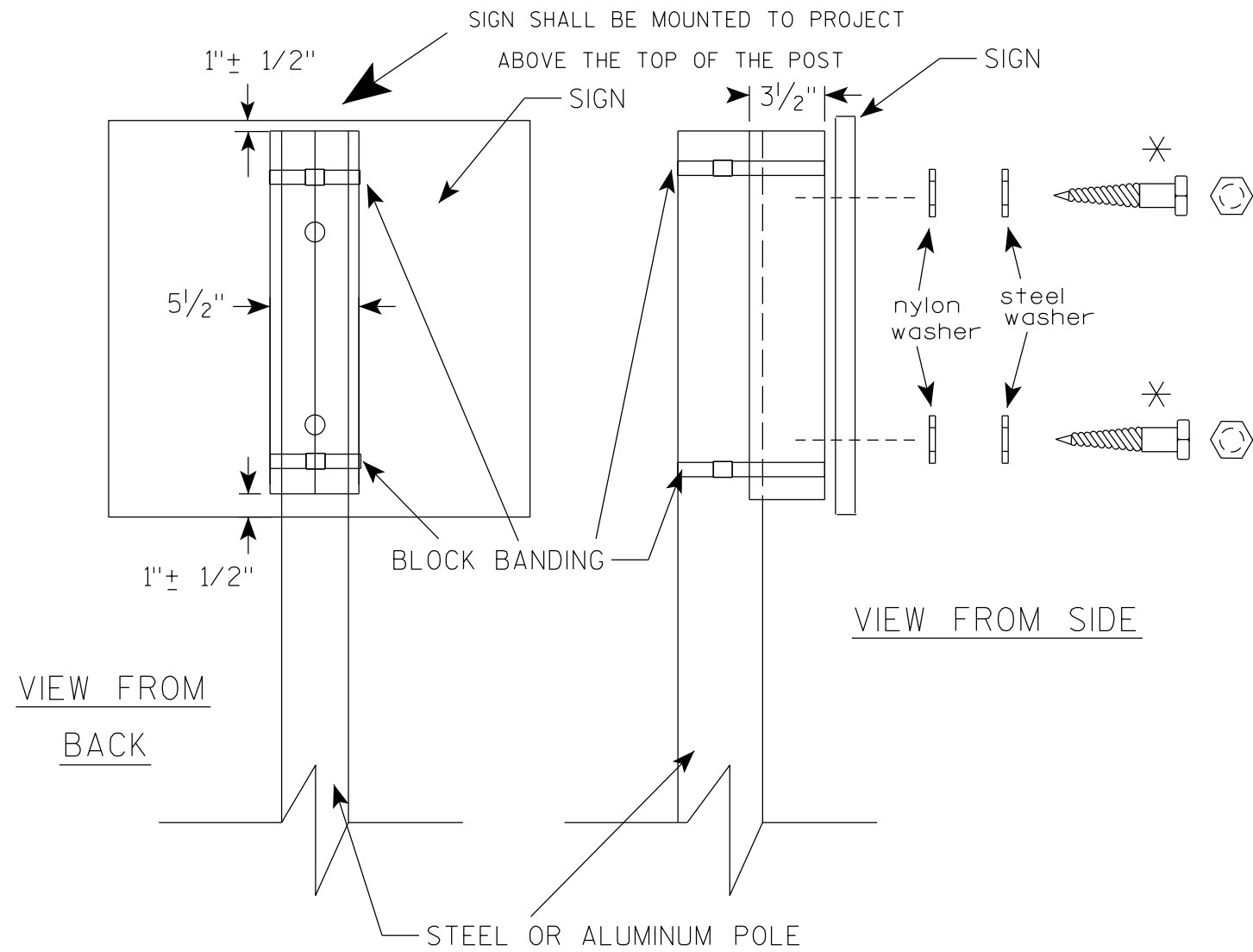
1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

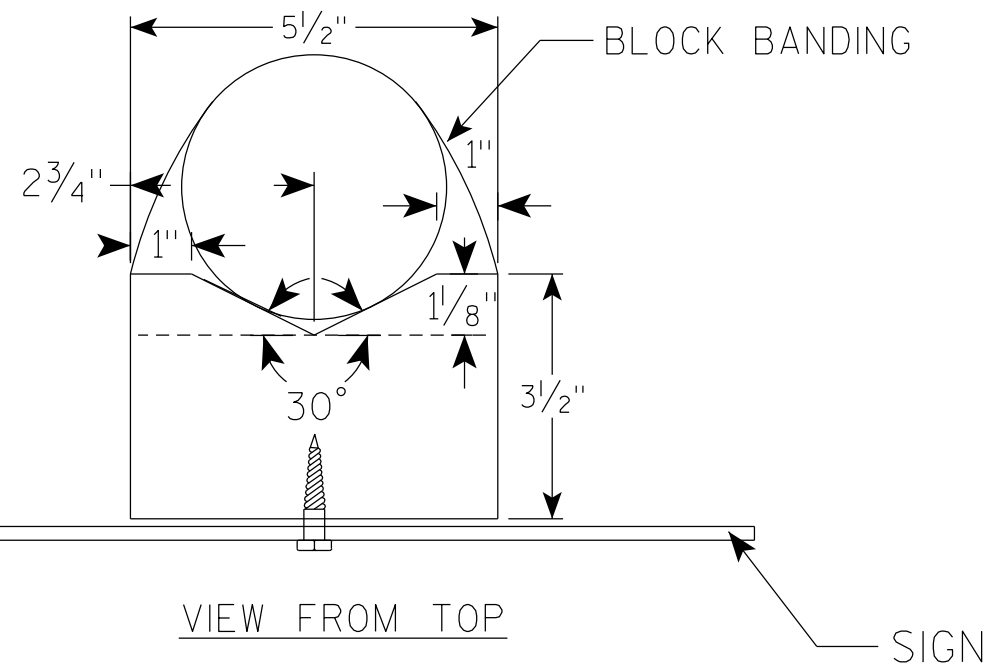
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM  
BACK

VIEW FROM SIDE

STEEL OR ALUMINUM POLE



VIEW FROM TOP

SIGN

### GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

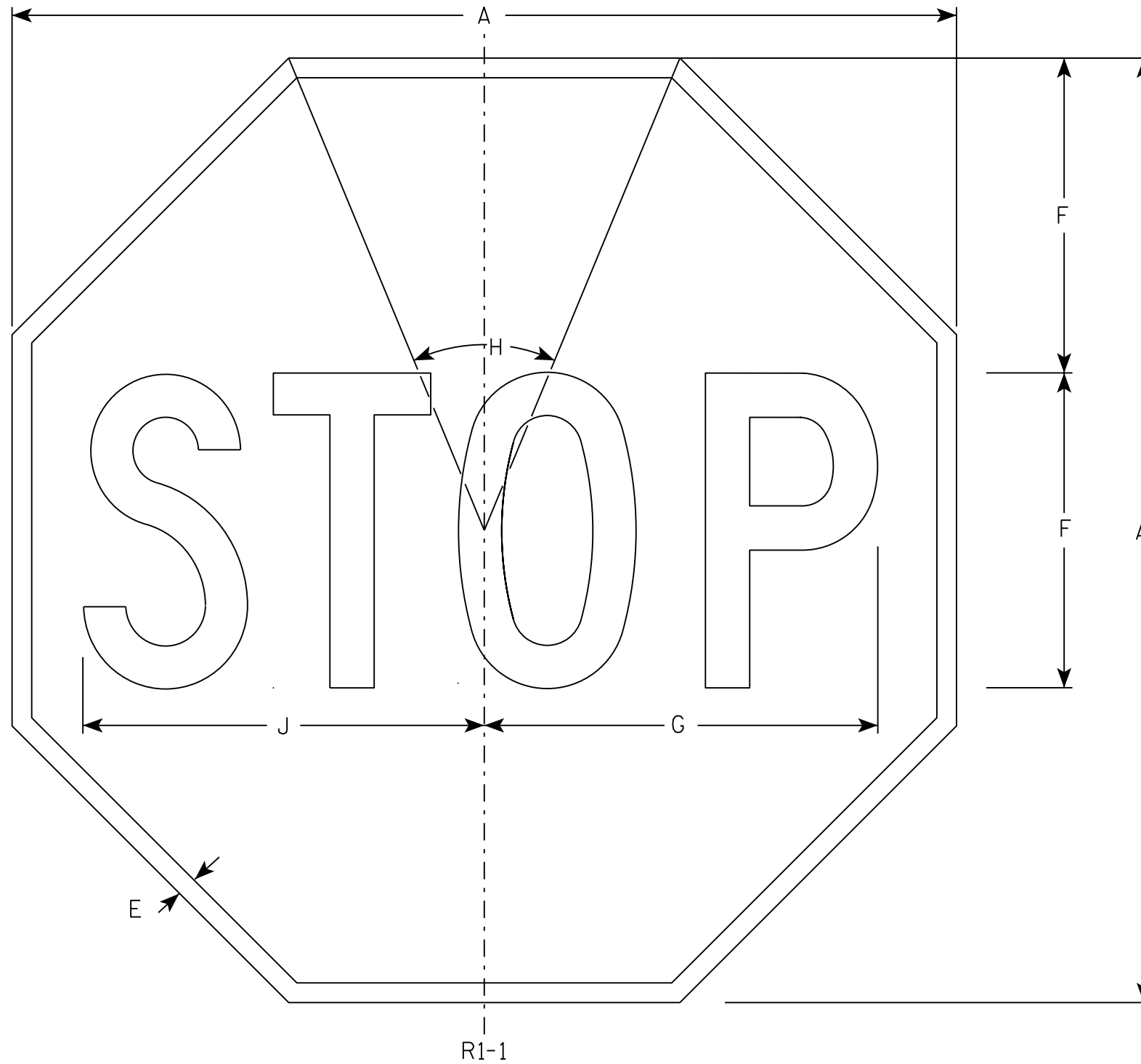
PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Red  
Message - White
3. Message Series - C



R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

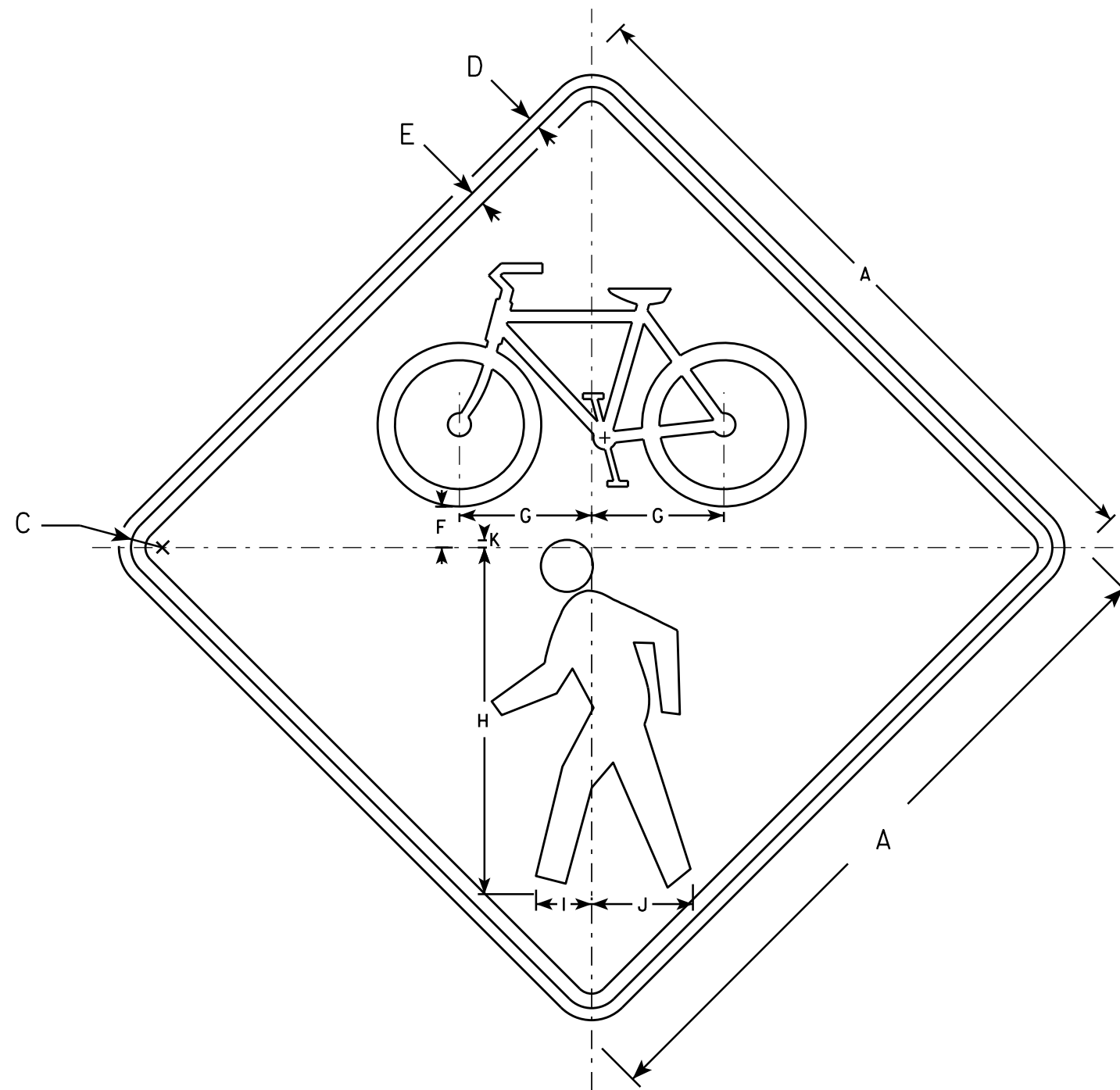
STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



W11-15

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	1 3/8	4 5/8	12	1 7/8	3 1/2	1/4																4.0
2S	30		1 3/8	1/2	5/8	1 3/4	5 3/4	15	2 3/8	4 3/8	3/8																6.25
2M	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																9.0
3	36		1 5/8	5/8	3/4	2 1/8	6 7/8	18	2 7/8	5 1/4	3/8																16.0
4	48		2 1/4	3/4	1	2 7/8	9 1/8	24	3 7/8	7	1/2																16.0
5																											

**STANDARD SIGN**  
W11-15

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

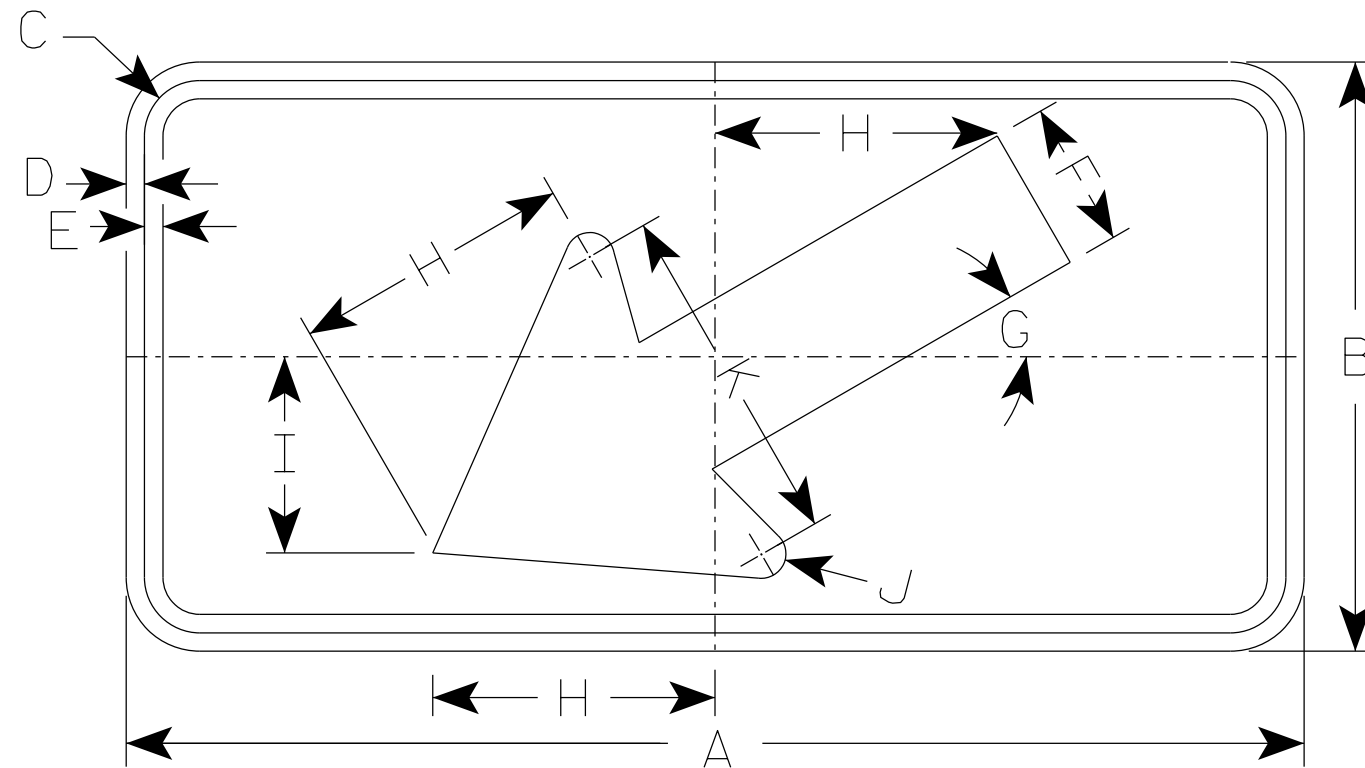
DATE 2/13/14 PLATE NO. W11-15.4

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. W16-7R is the same as W16-7L  
except the arrow is reversed along  
the vertical centerline.



W16-7L

- \* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
- \* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	3	30°	5 3/4	4	1/2	7																2.0
* 2M	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 3	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 4	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5																											

STANDARD SIGN  
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/2021 PLATE NO. W16-7.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - C



W16-9P

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN  
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

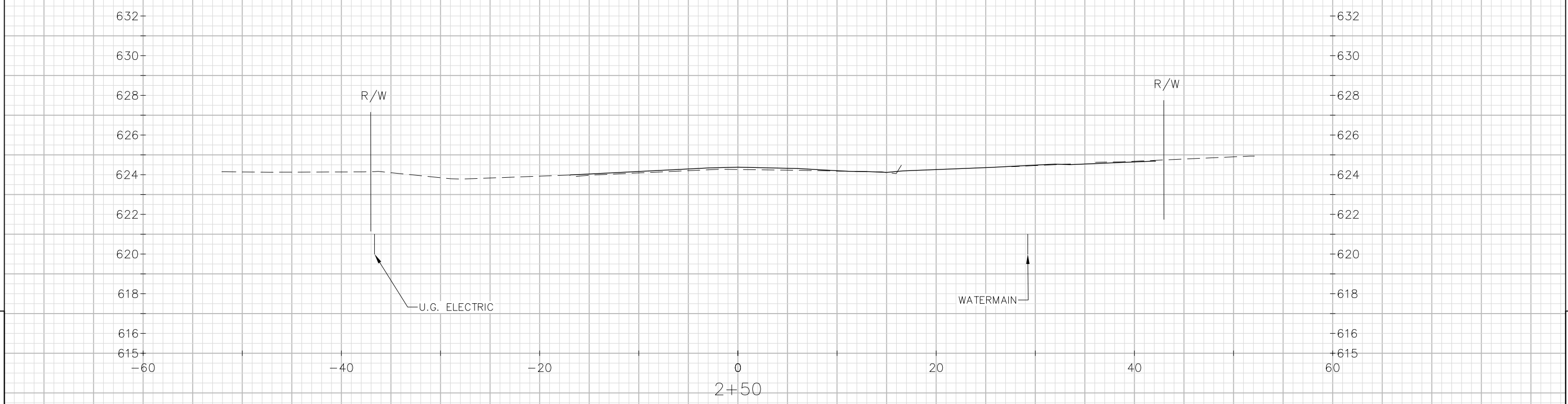
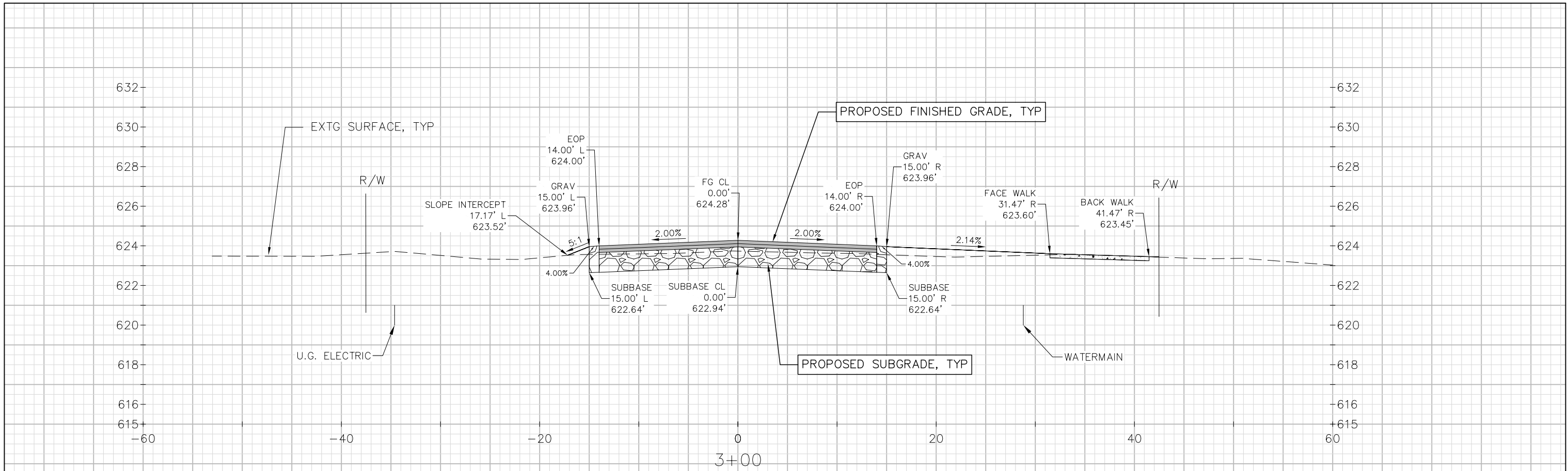
APPROVED Matthew R. Rauch  
State Traffic Engineer

DATE 3/7/19 PLATE NO. W16-9P.7

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

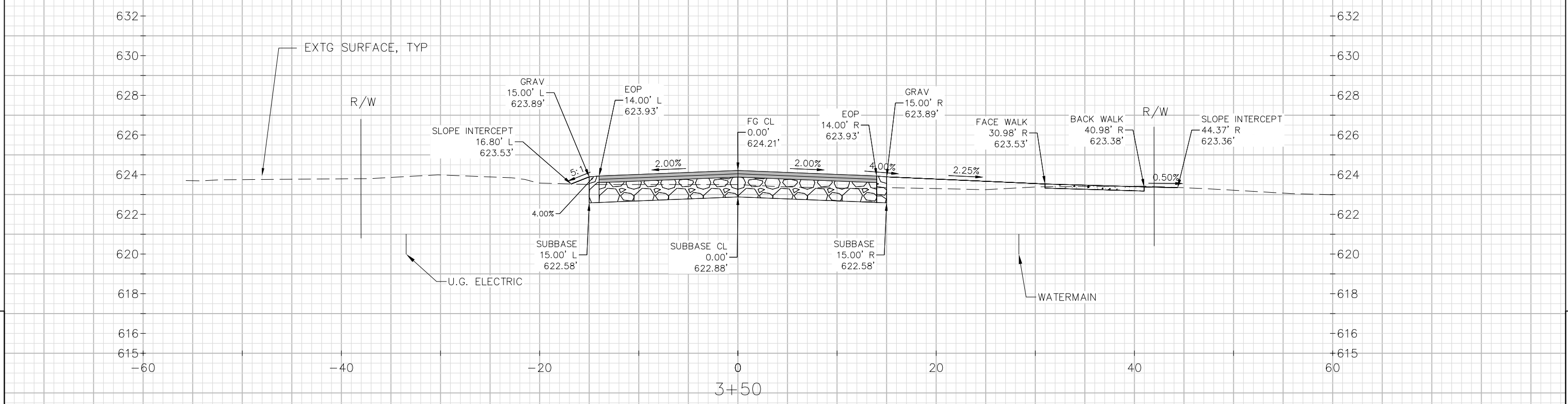
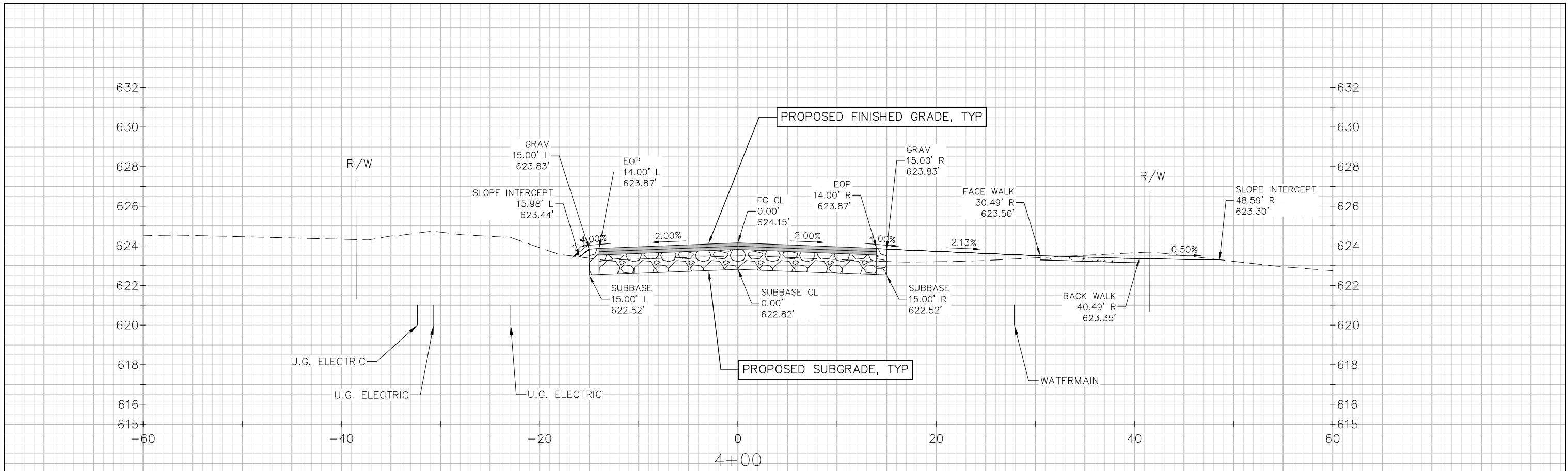
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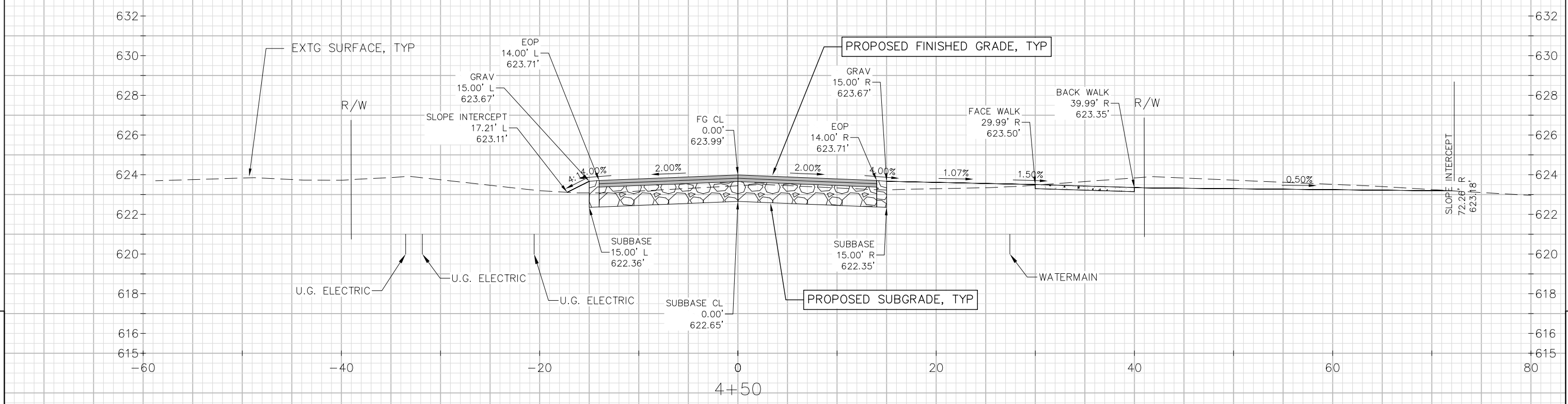
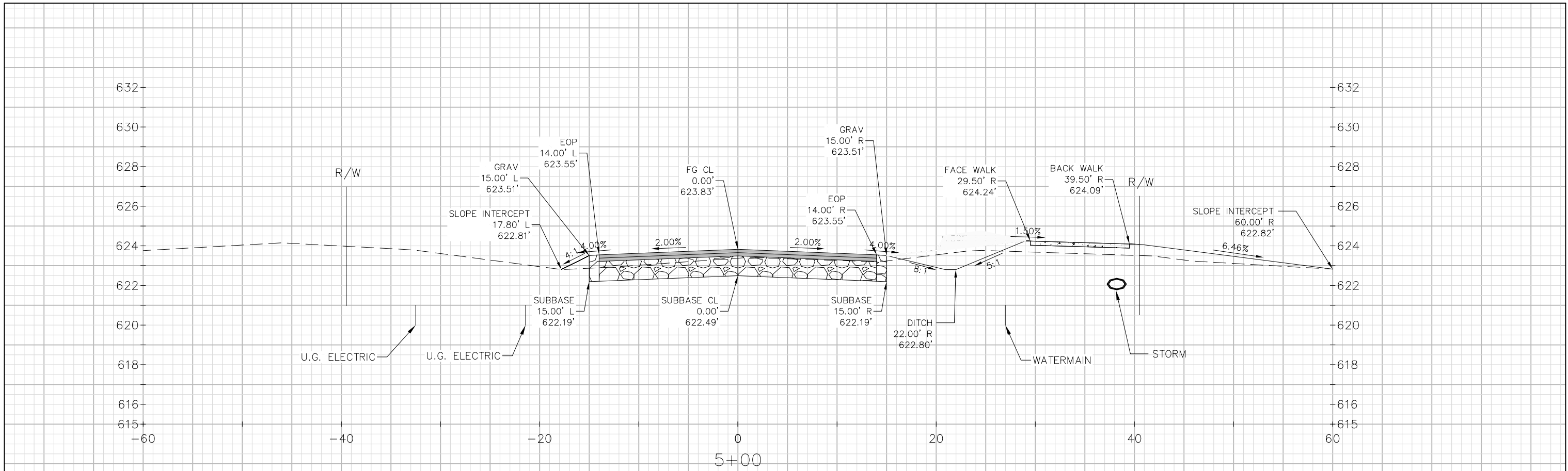
PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      CROSS SECTIONS: VILLA LOUIS ROAD      SHEET **E**

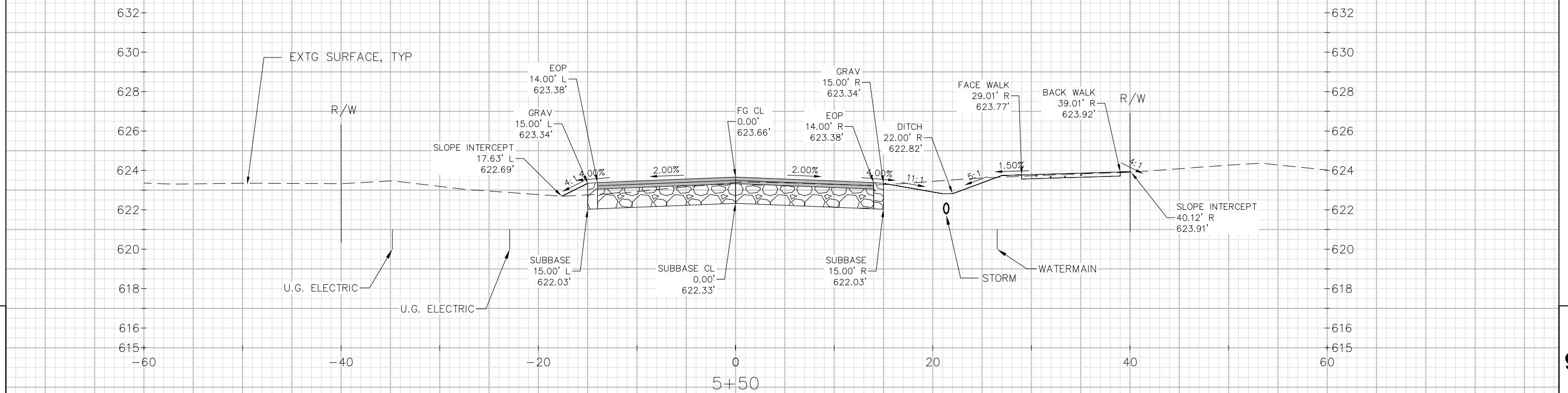
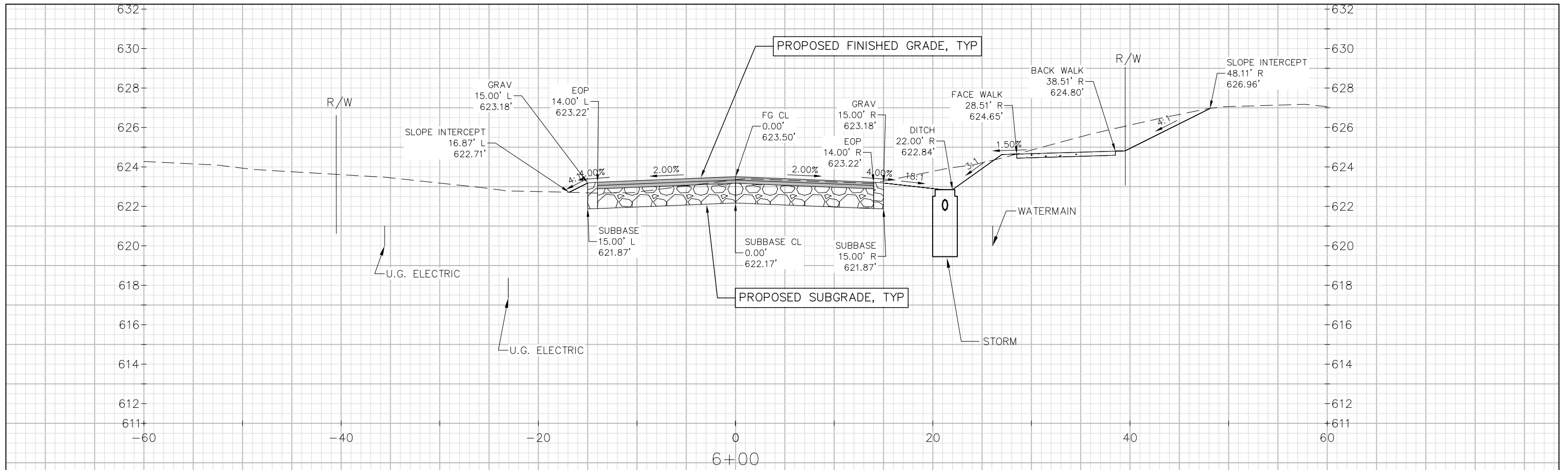
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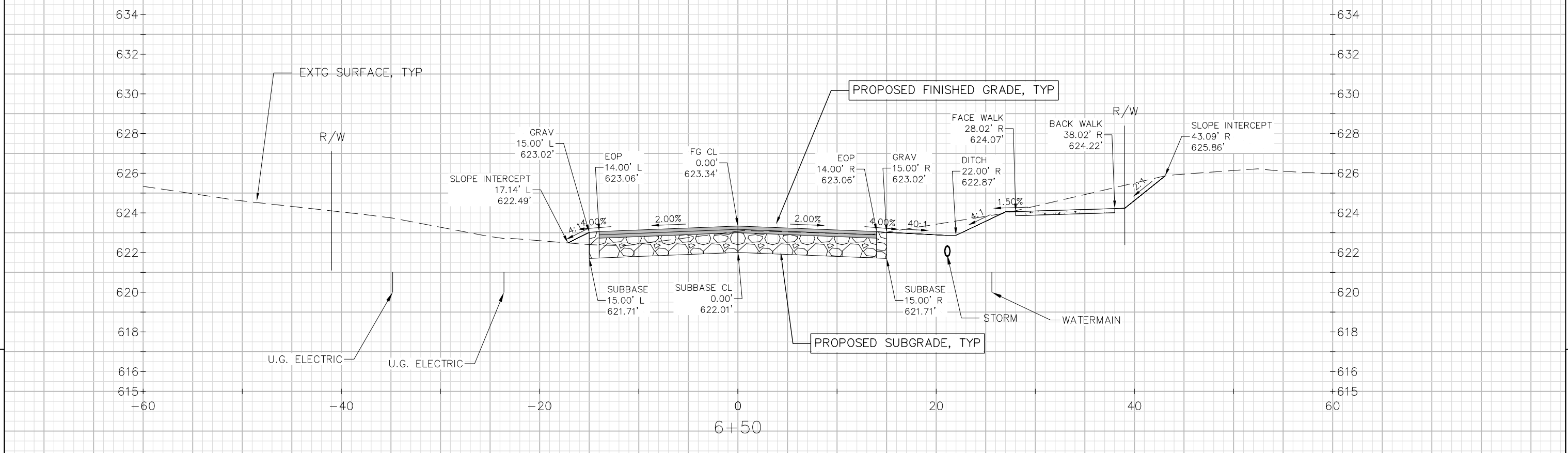
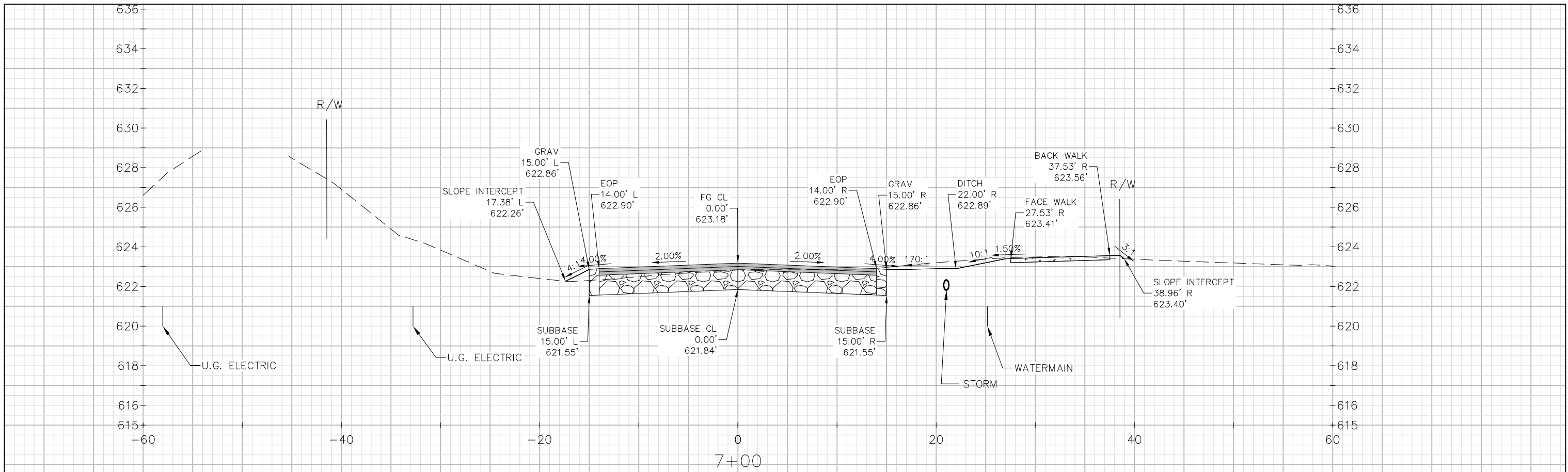
LAYOUT NAME - ####

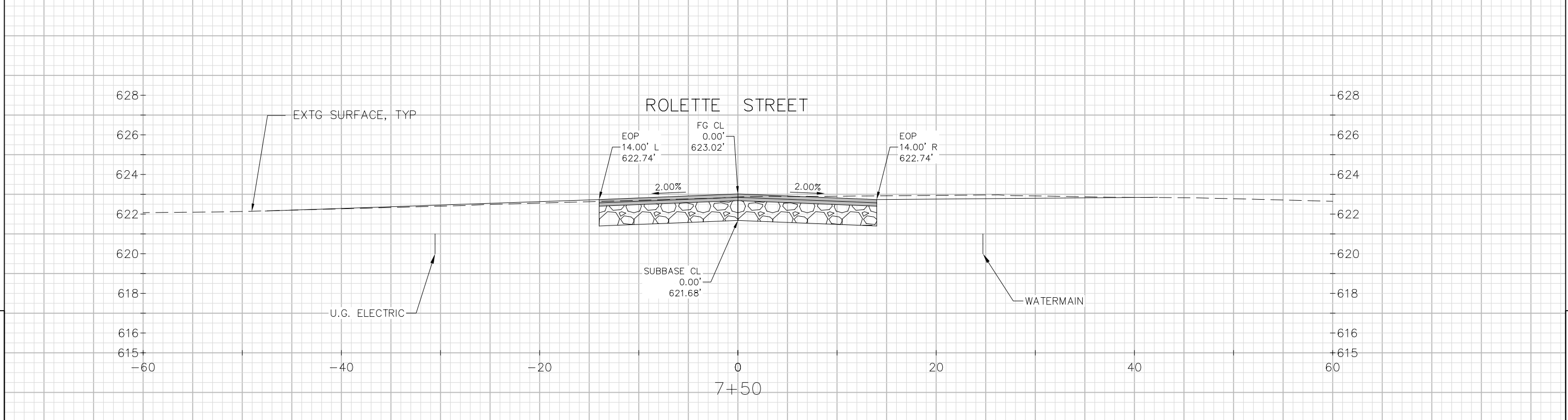
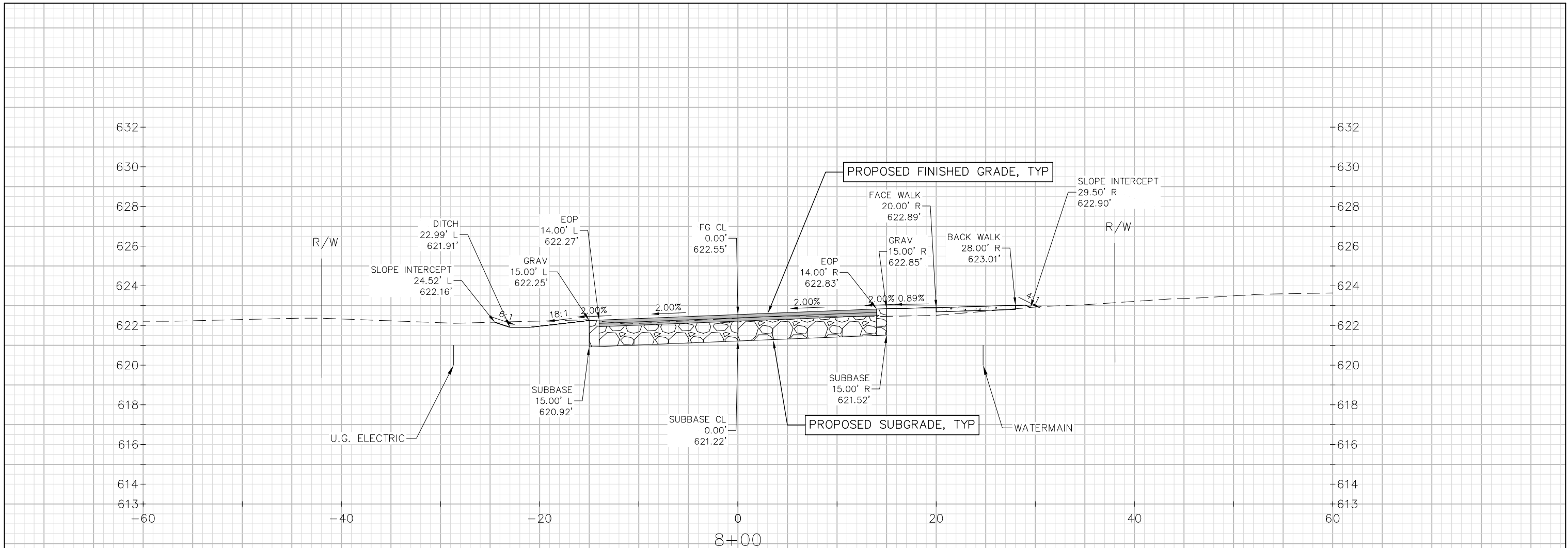
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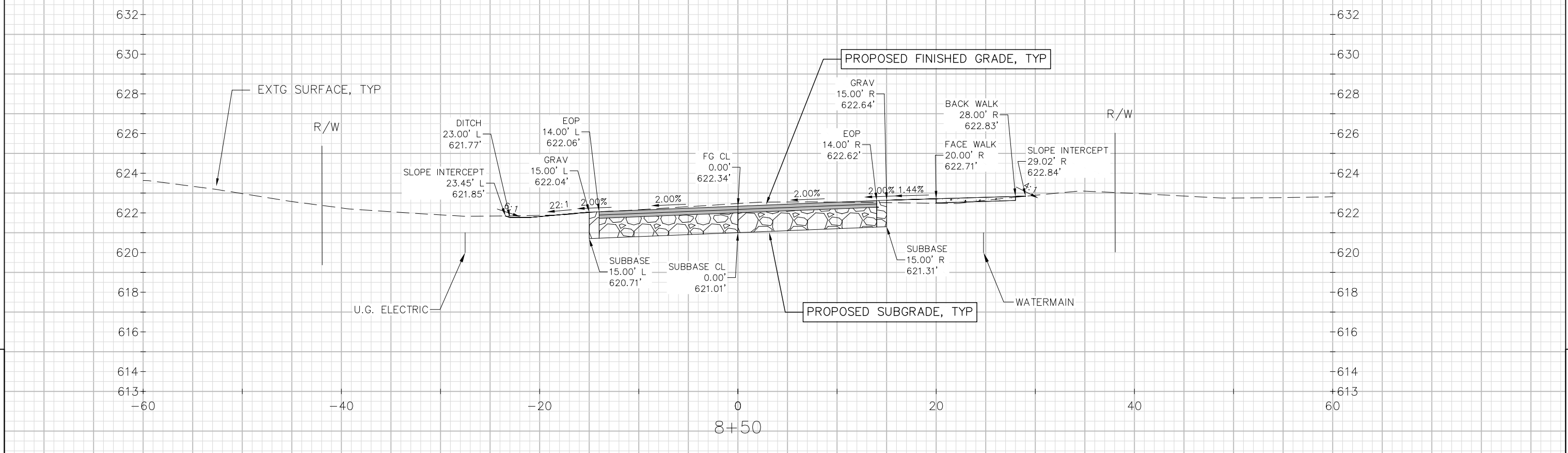
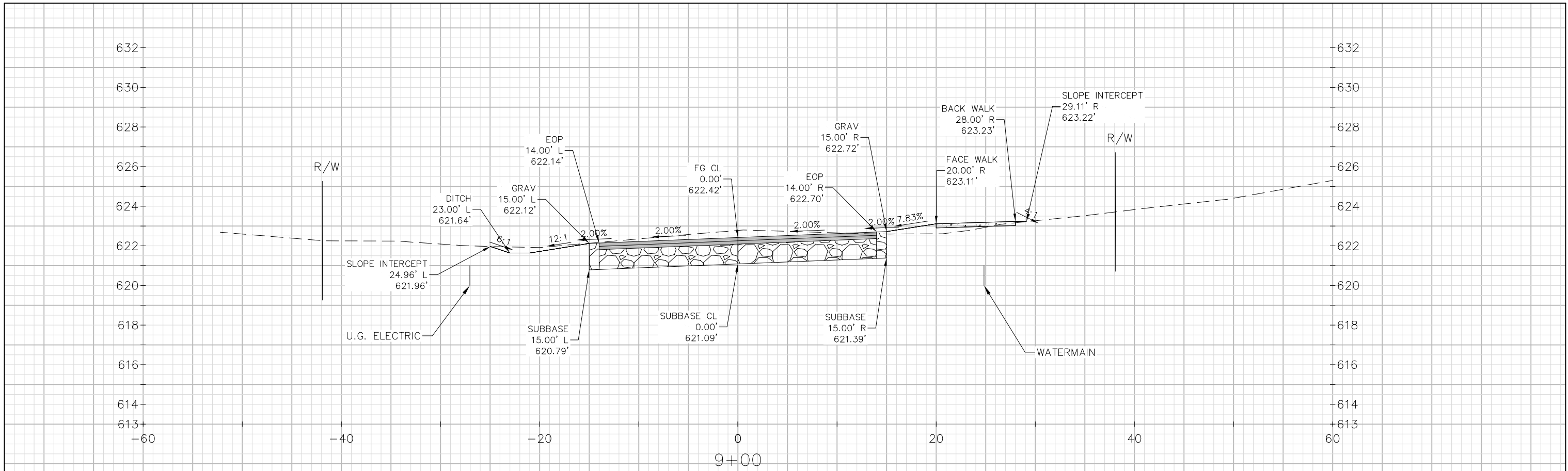


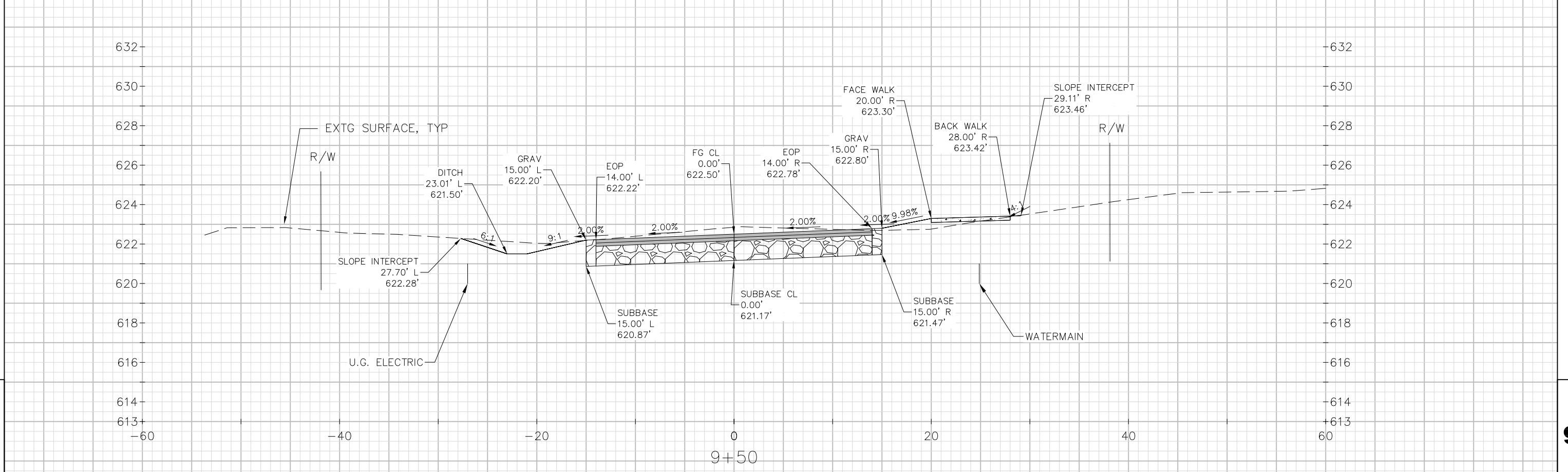
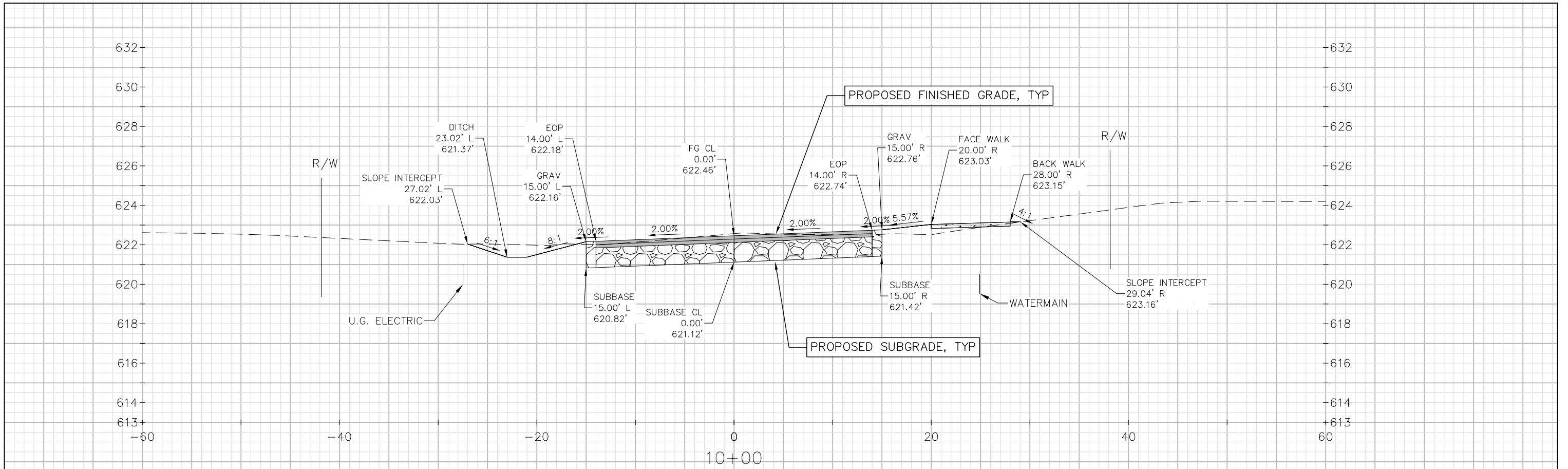








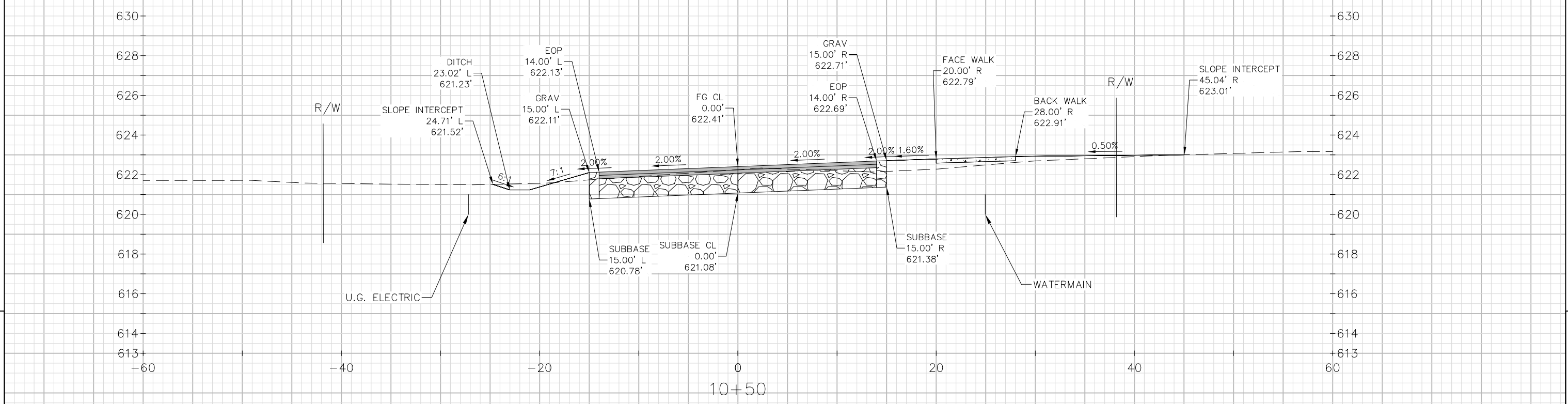
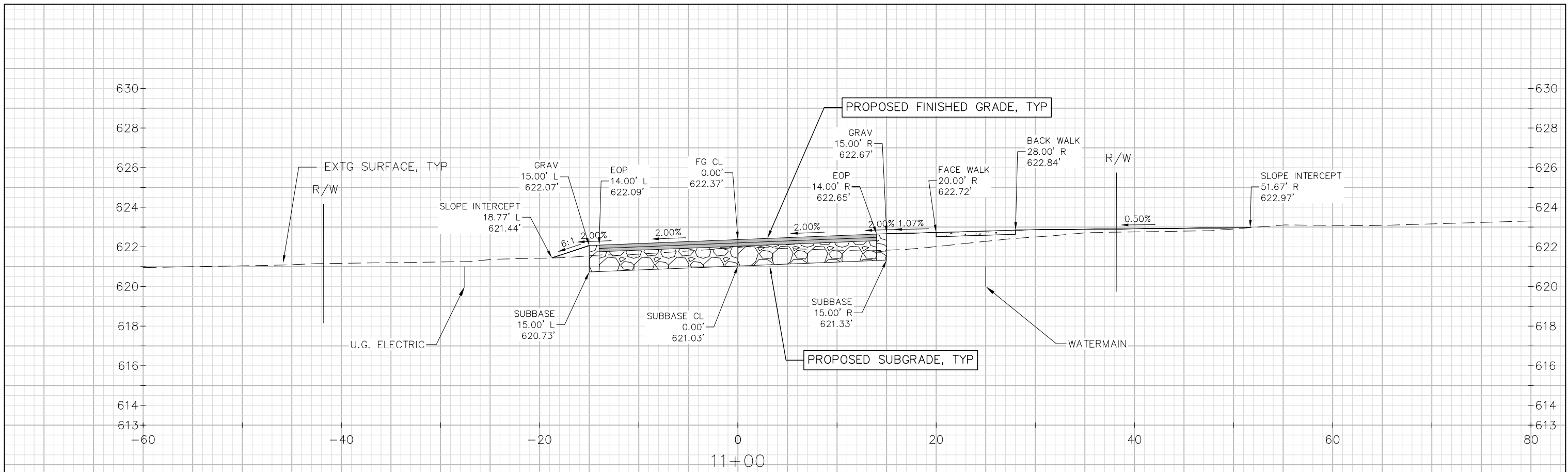


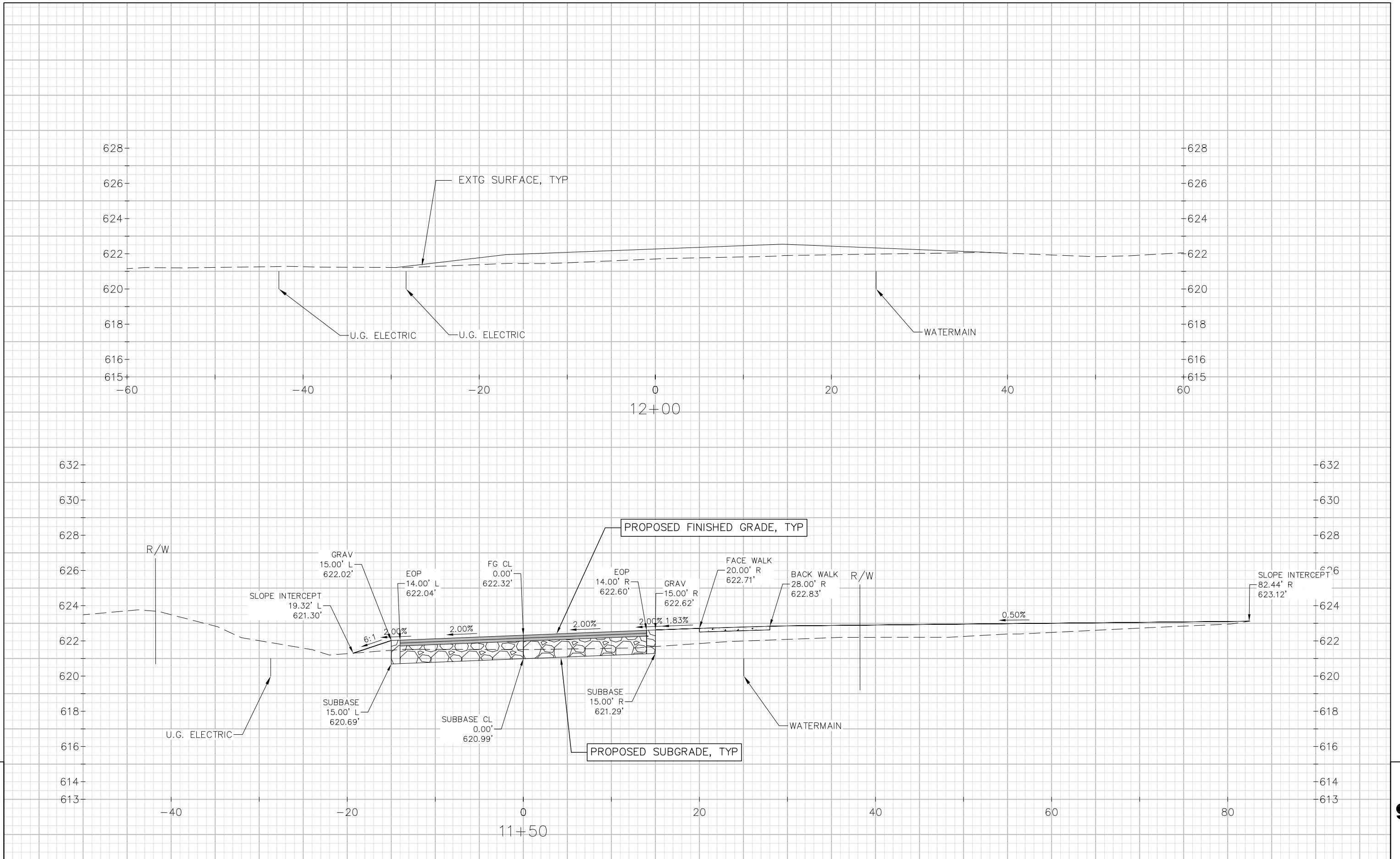


PROJECT NO: 5997-00-41      HWY: VILLA LOUIS ROAD      COUNTY: CRAWFORD      CROSS SECTIONS: VILLA LOUIS ROAD      SHEET      **E**

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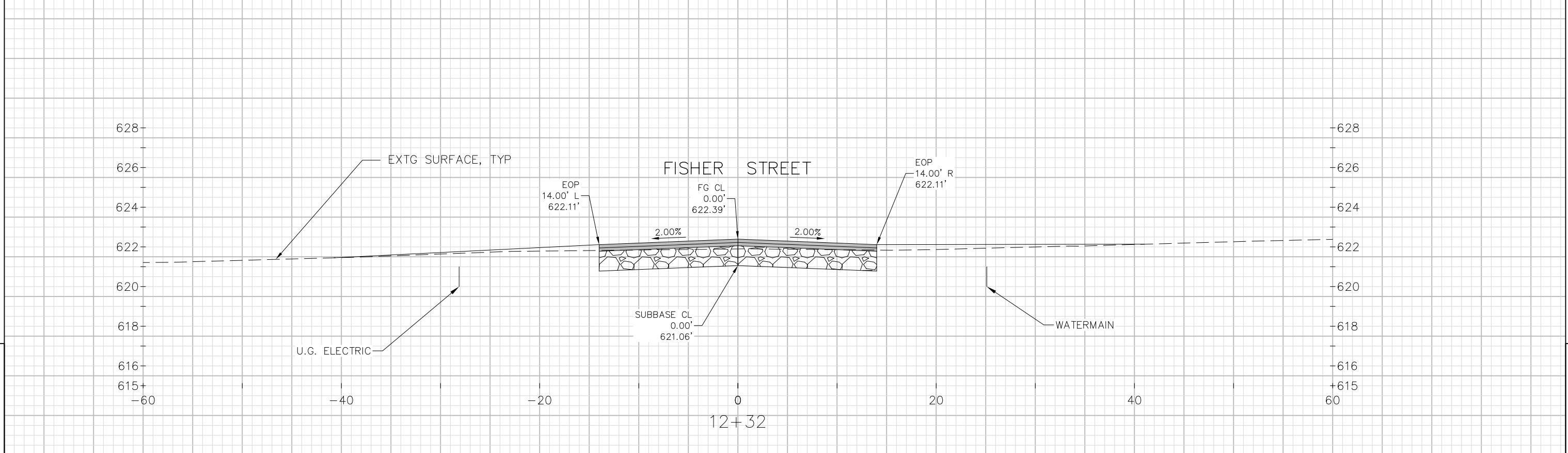
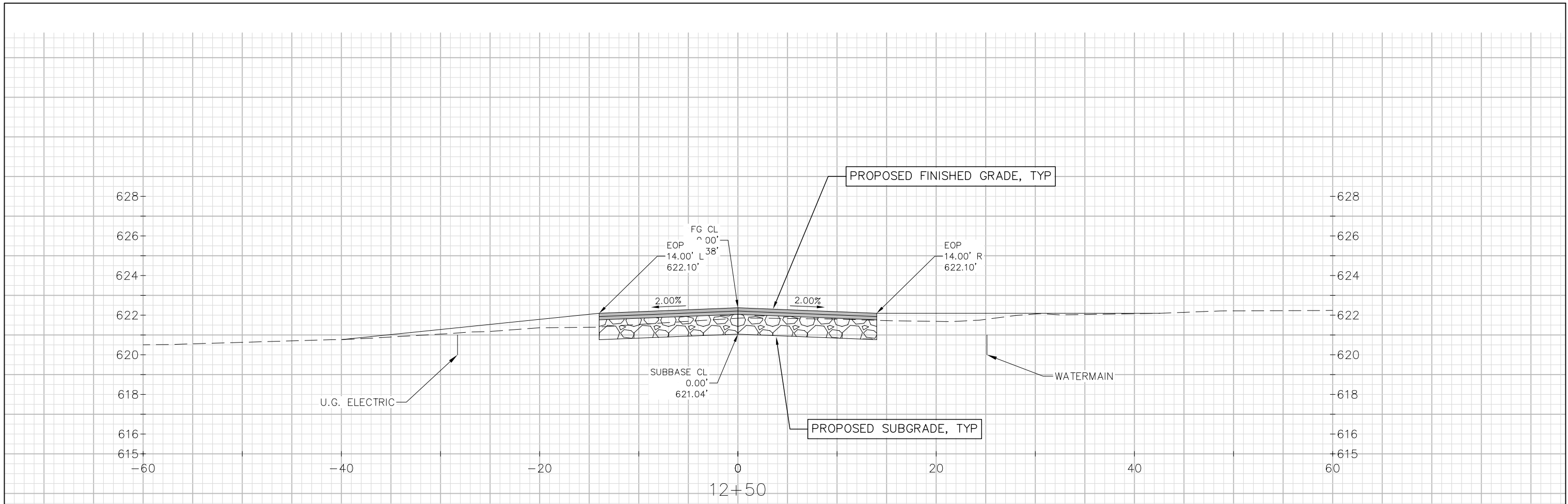
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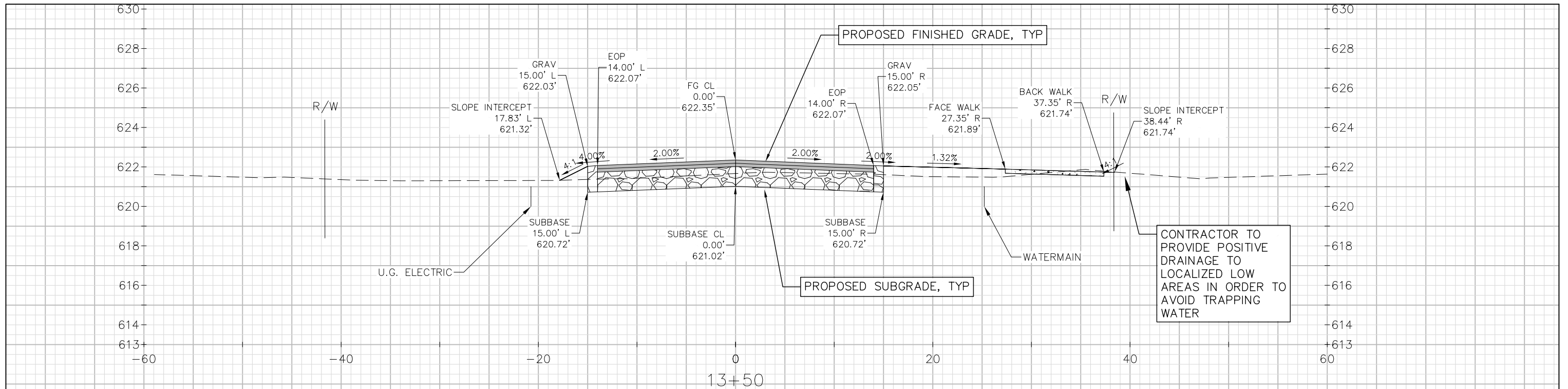
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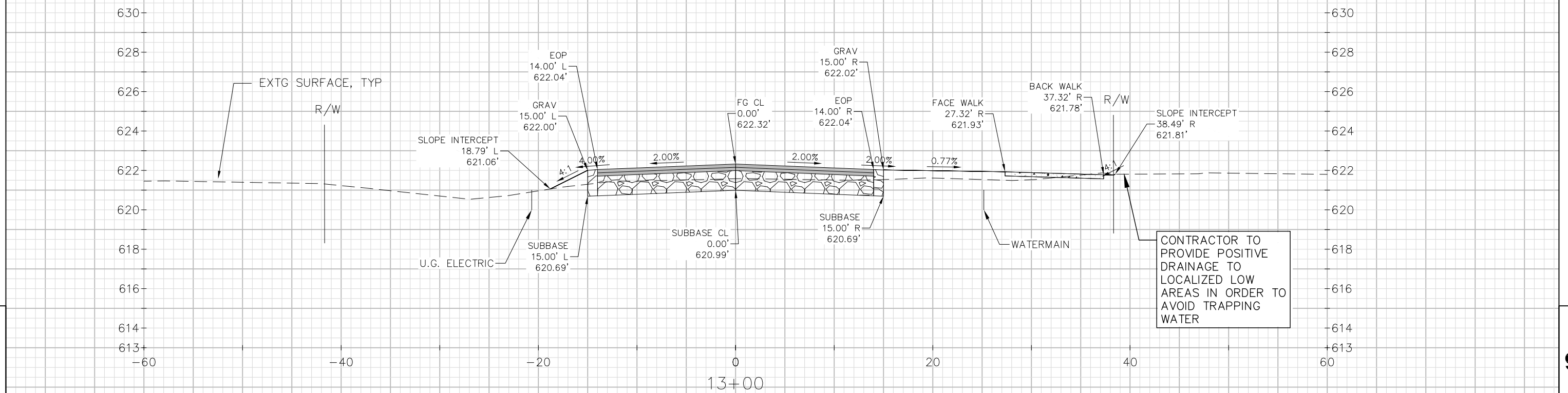
PROJECT NO: 5997-00-41 | HWY: VILLA LOUIS ROAD | COUNTY: CRAWFORD | CROSS SECTIONS: VILLA LOUIS ROAD | SHEET | **E**

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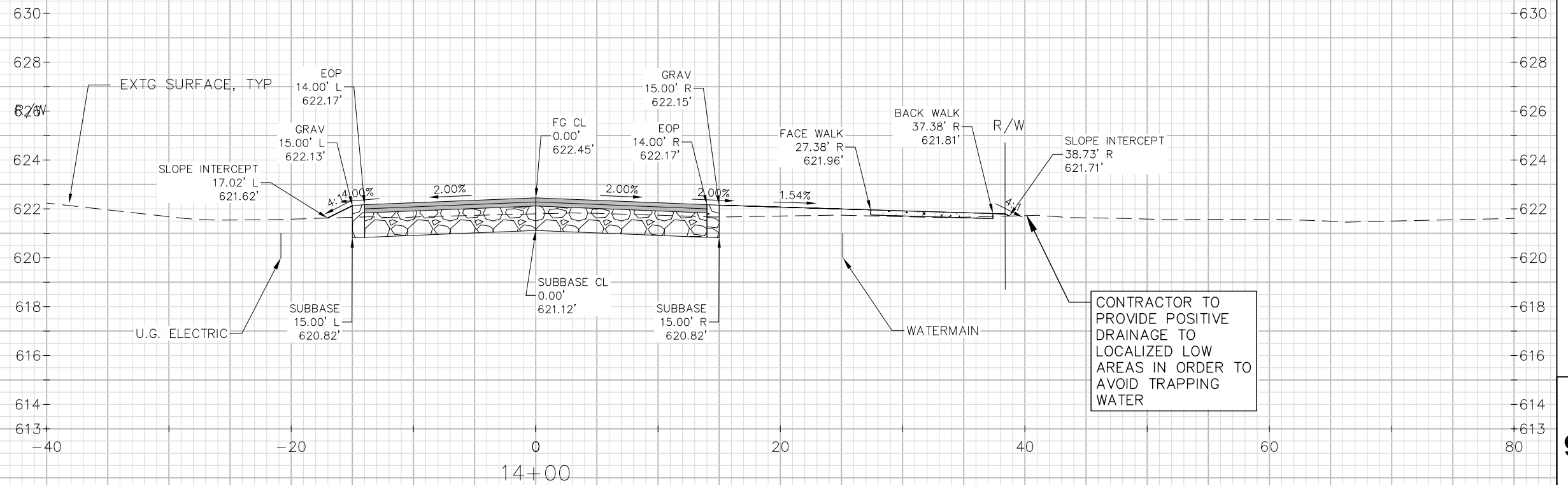
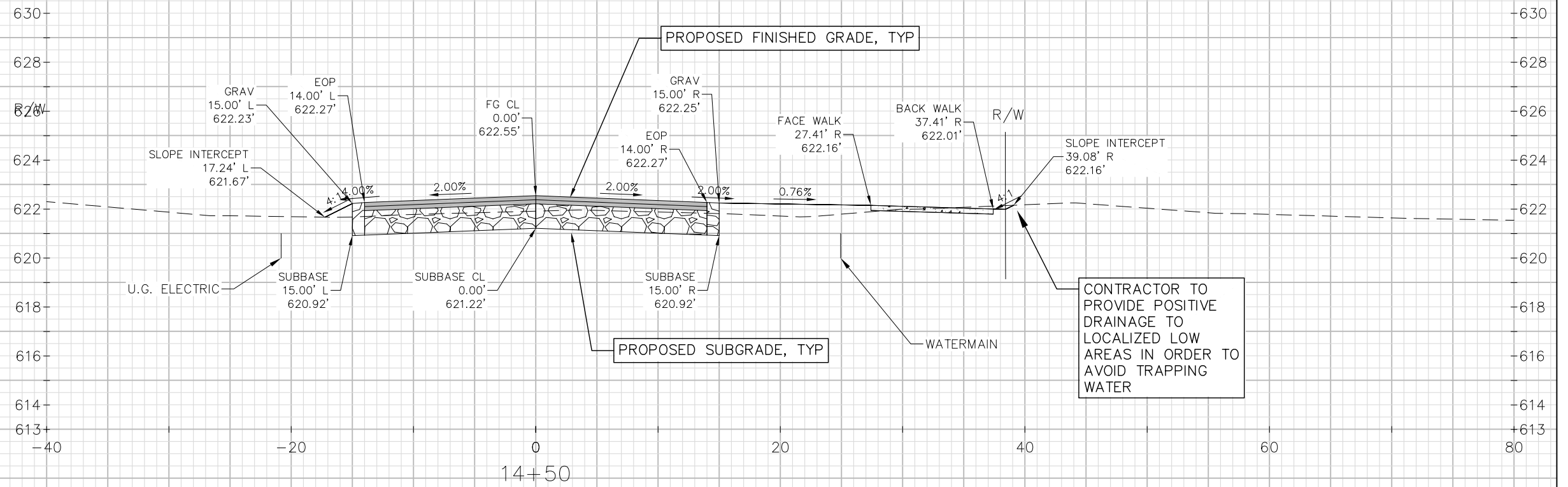
CONTRACTOR TO PROVIDE POSITIVE DRAINAGE TO LOCALIZED LOW AREAS IN ORDER TO AVOID TRAPPING WATER



CONTRACTOR TO PROVIDE POSITIVE DRAINAGE TO LOCALIZED LOW AREAS IN ORDER TO AVOID TRAPPING WATER

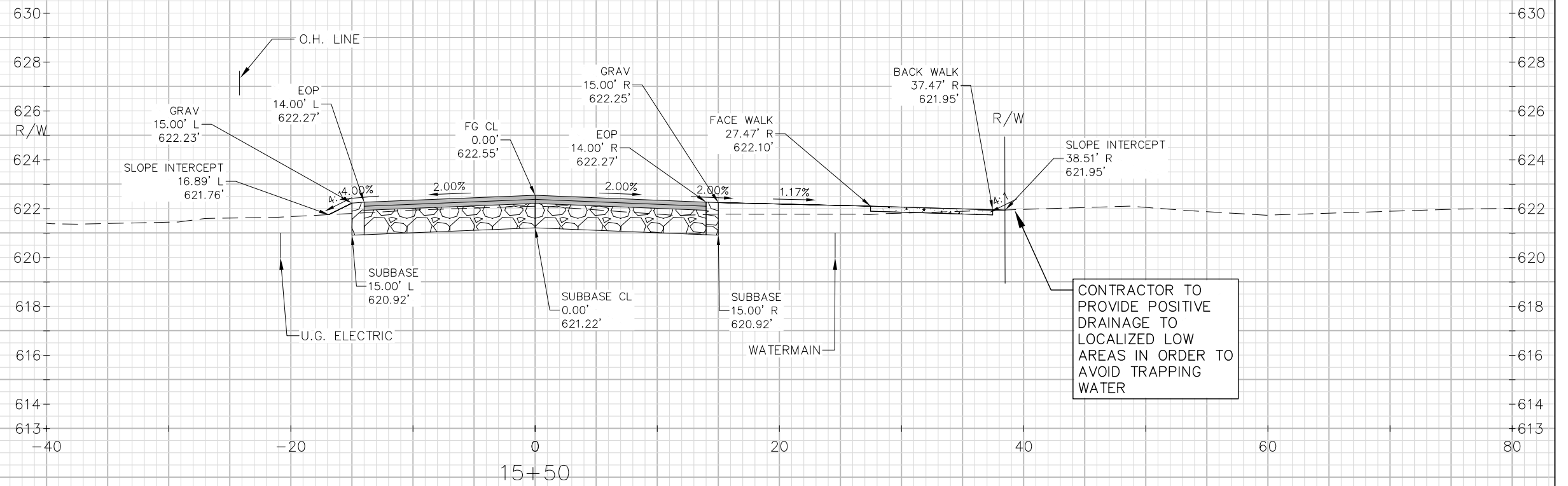
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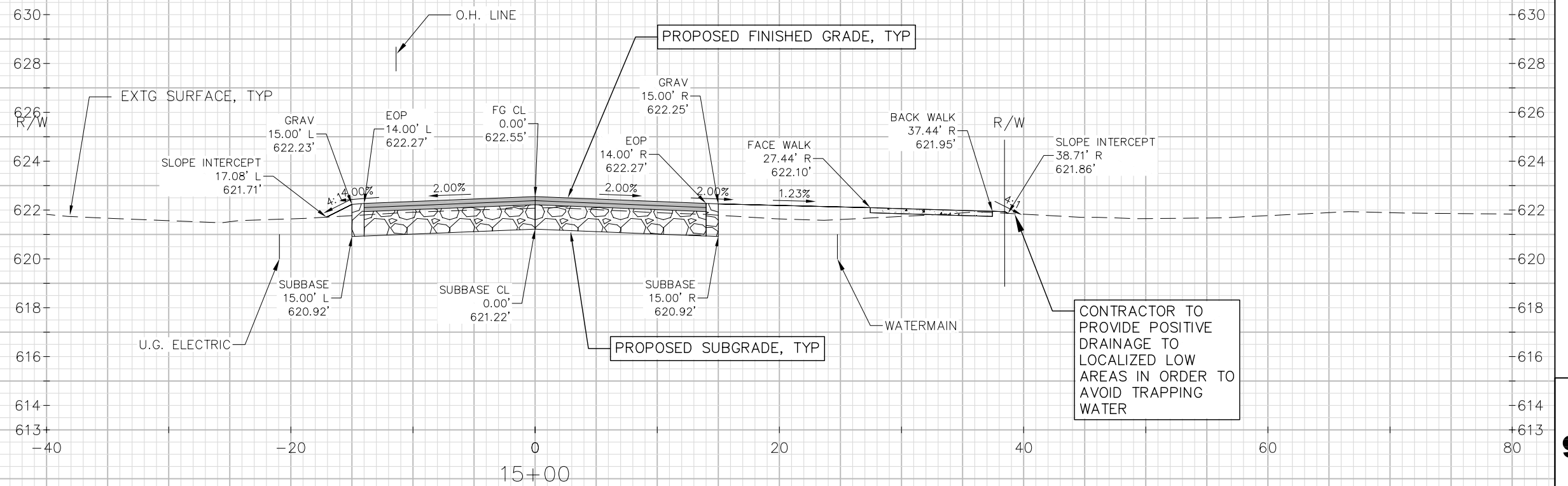


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CONTRACTOR TO PROVIDE POSITIVE DRAINAGE TO LOCALIZED LOW AREAS IN ORDER TO AVOID TRAPPING WATER



PROPOSED FINISHED GRADE, TYP

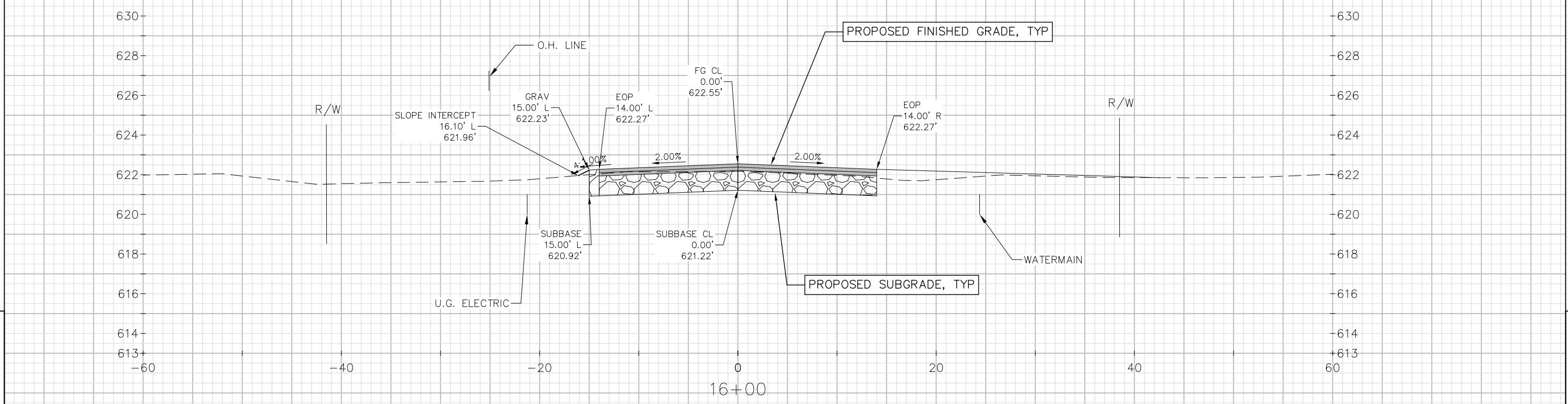
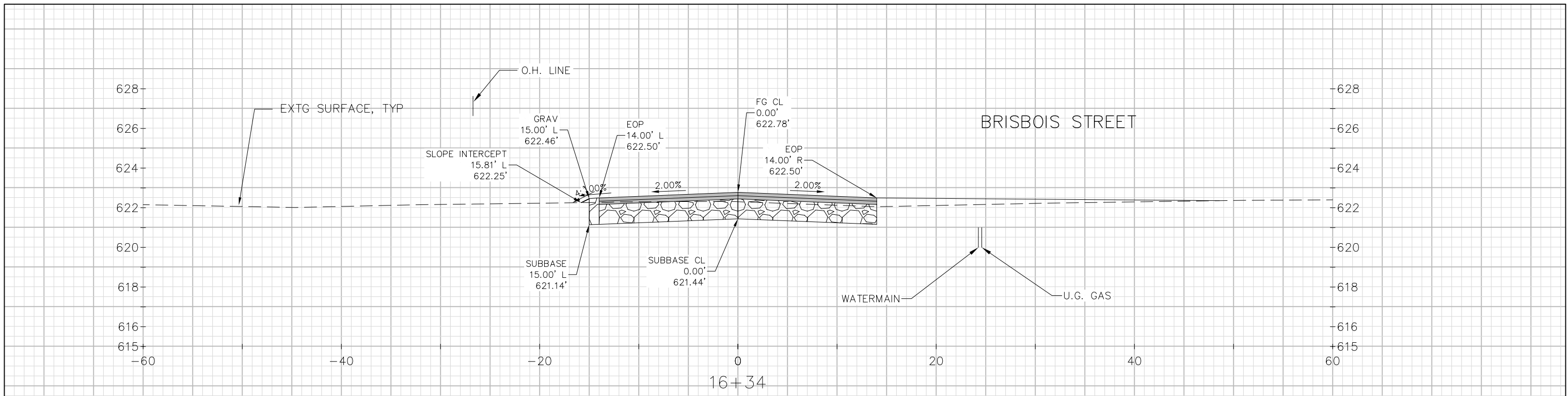
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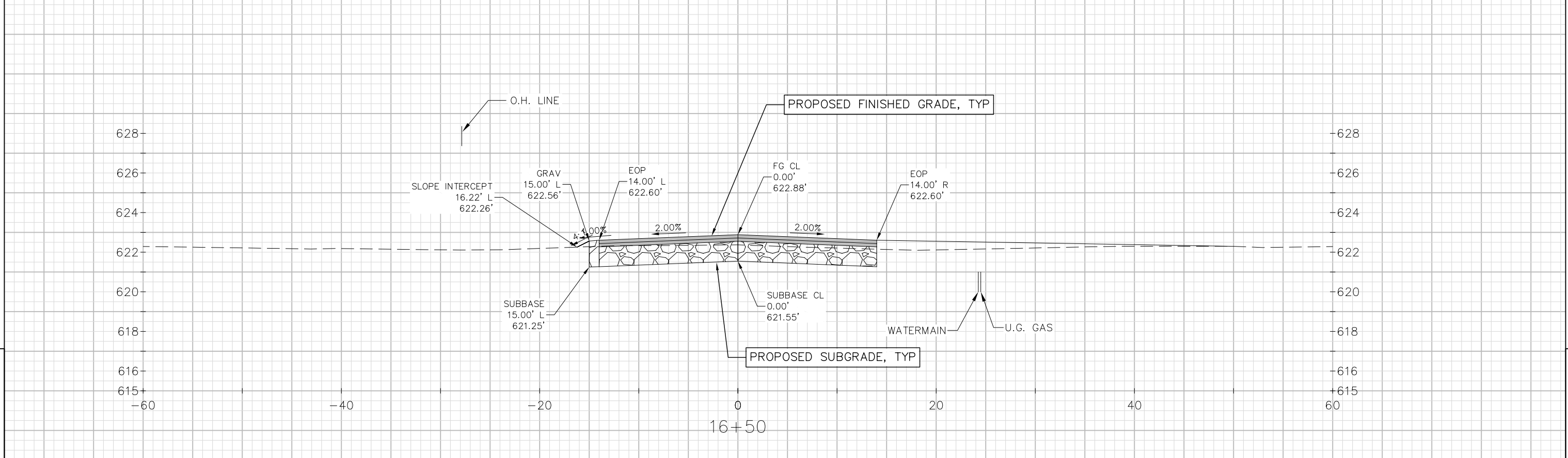
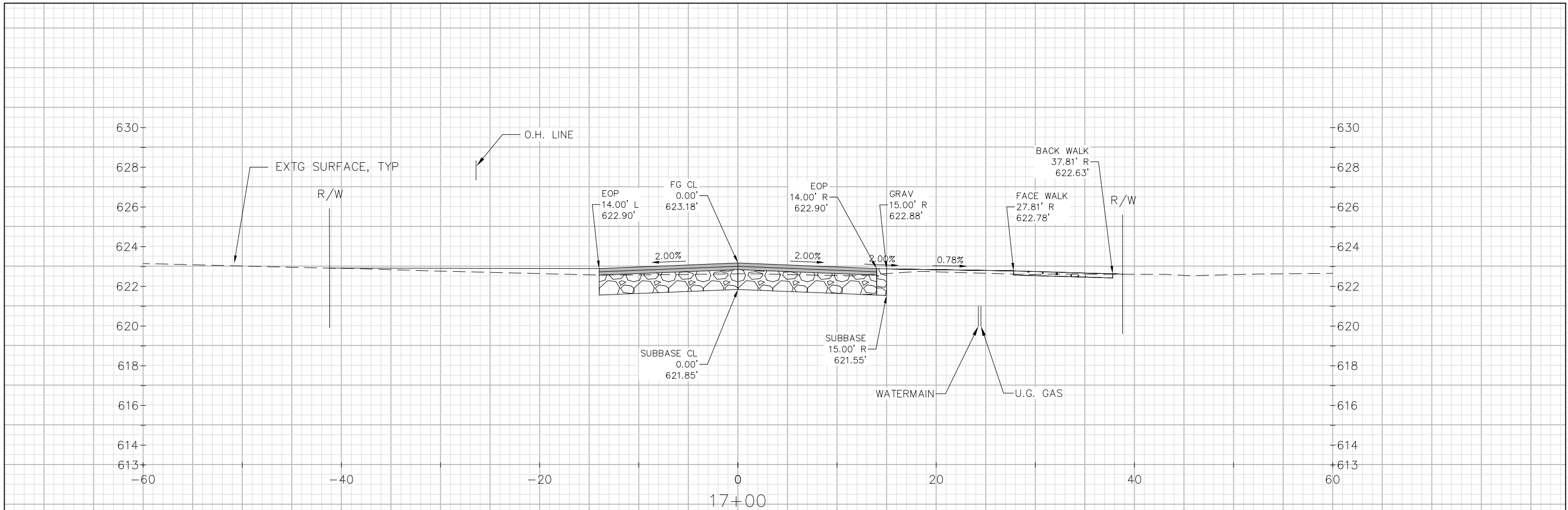
CONTRACTOR TO PROVIDE POSITIVE DRAINAGE TO LOCALIZED LOW AREAS IN ORDER TO AVOID TRAPPING WATER

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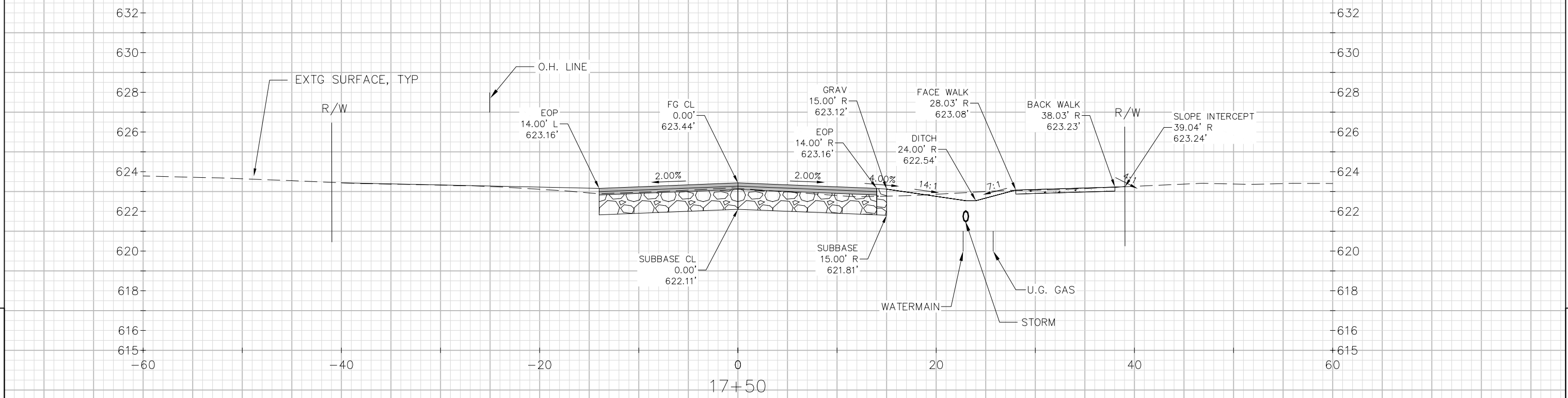
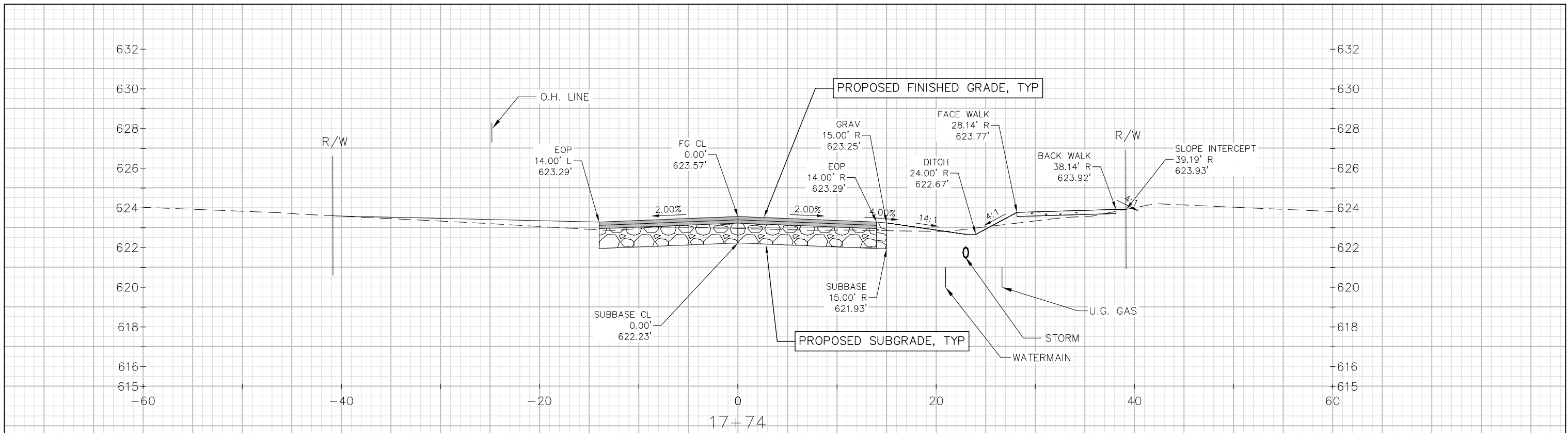


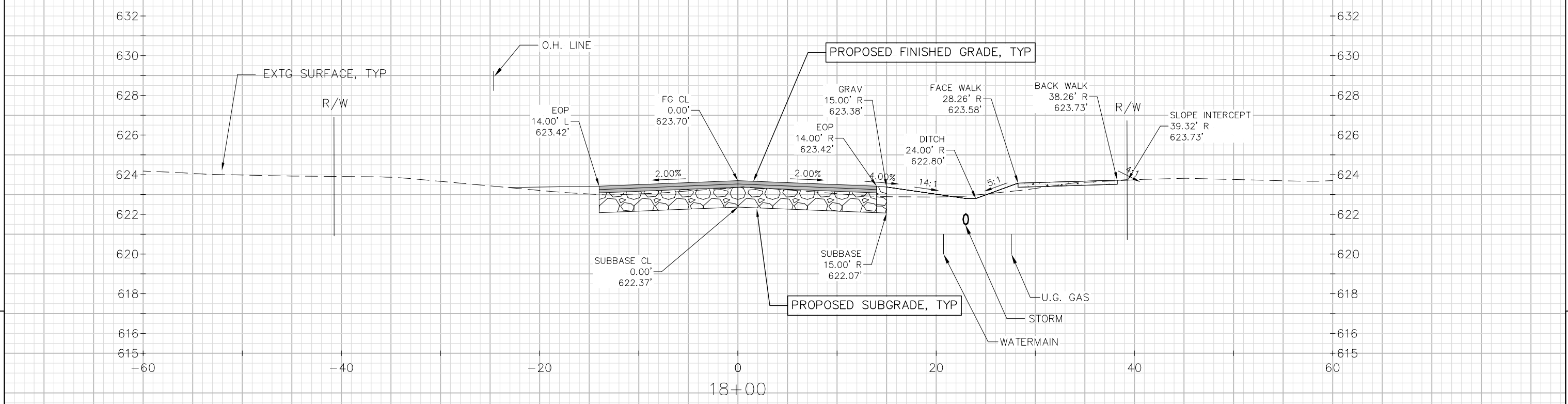
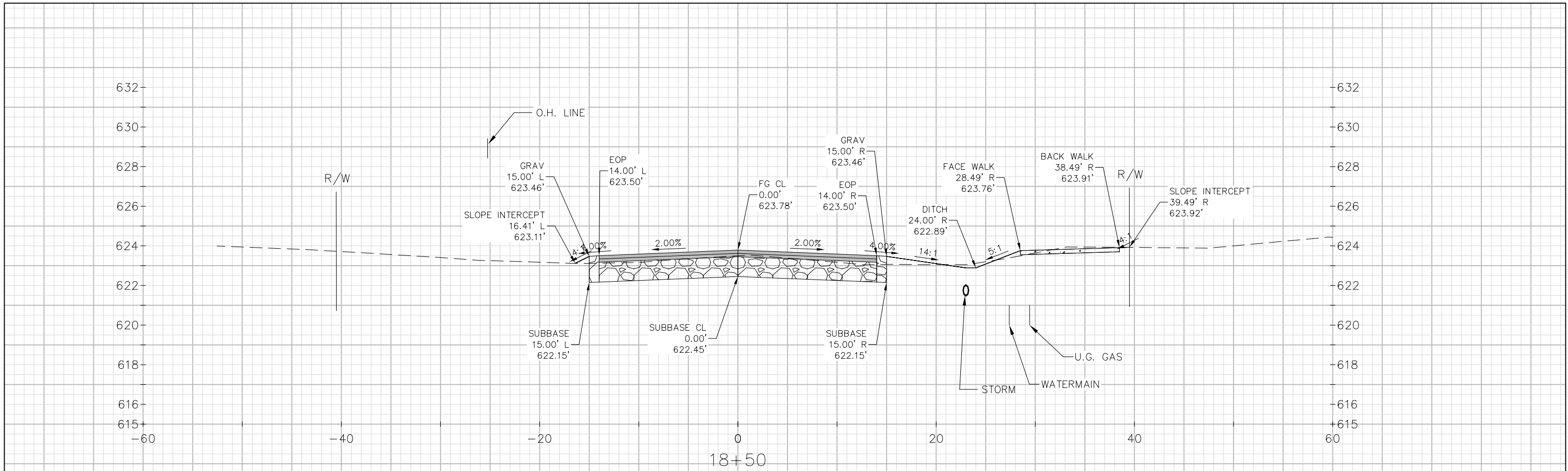


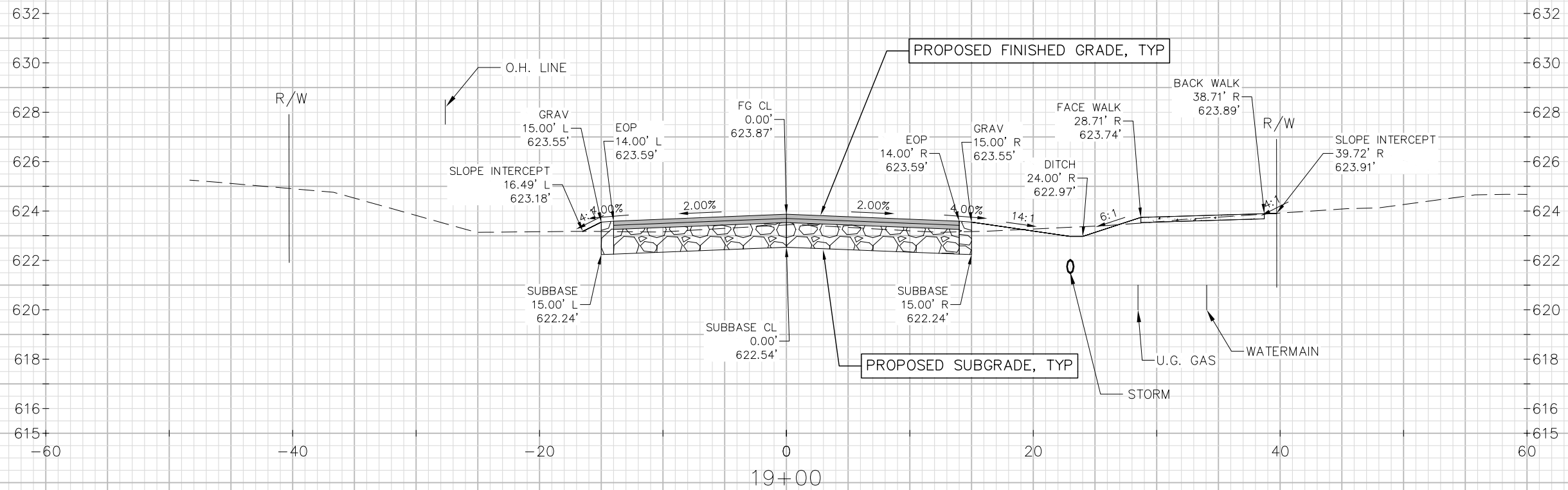
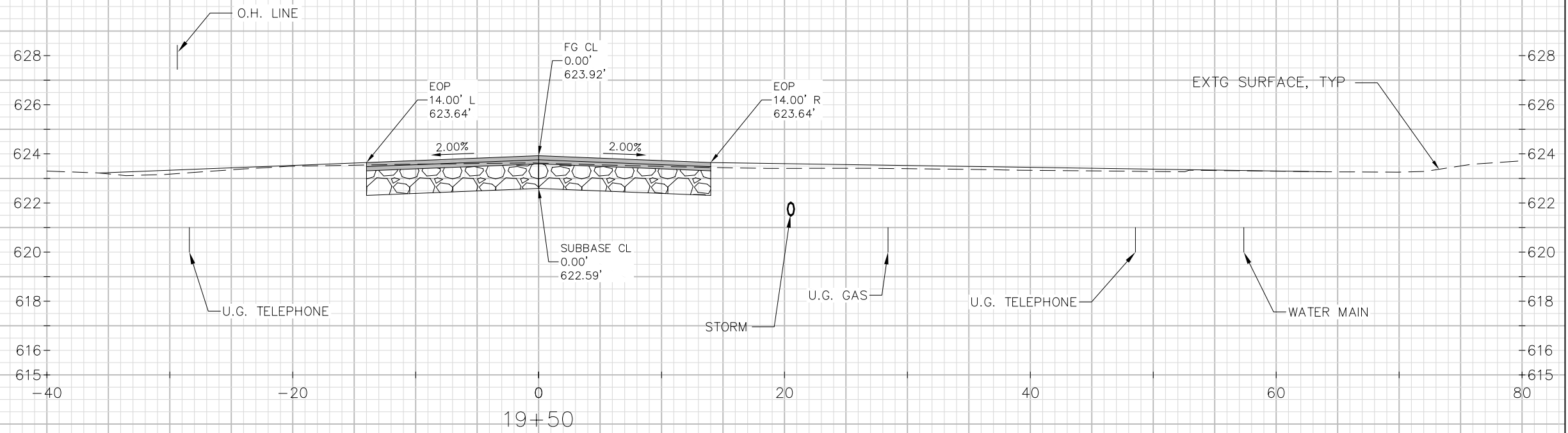
PROJECT NO: 5997-00-41 | HWY: VILLA LOUIS ROAD | COUNTY: CRAWFORD | CROSS SECTIONS: VILLA LOUIS ROAD | SHEET | E

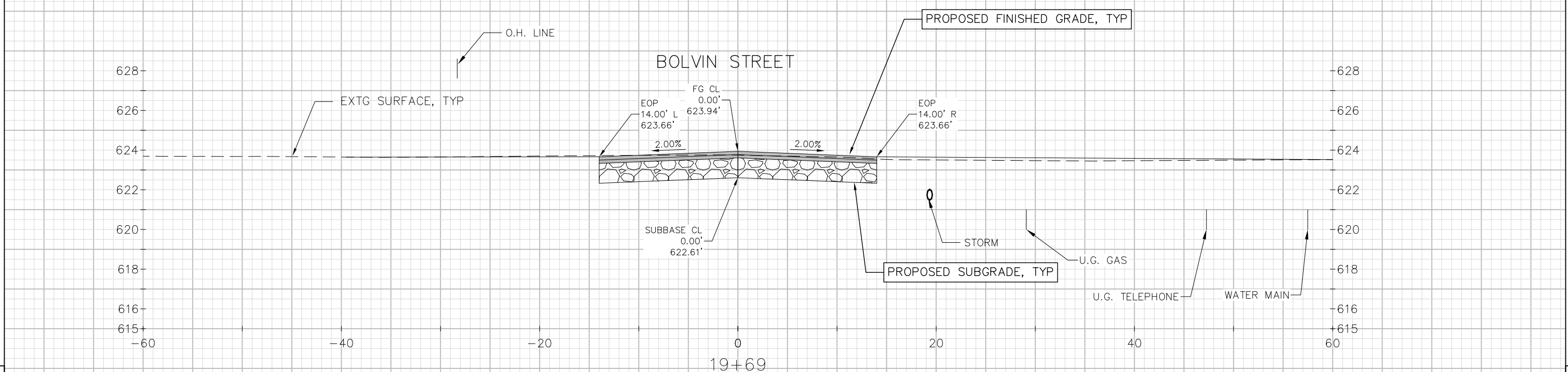
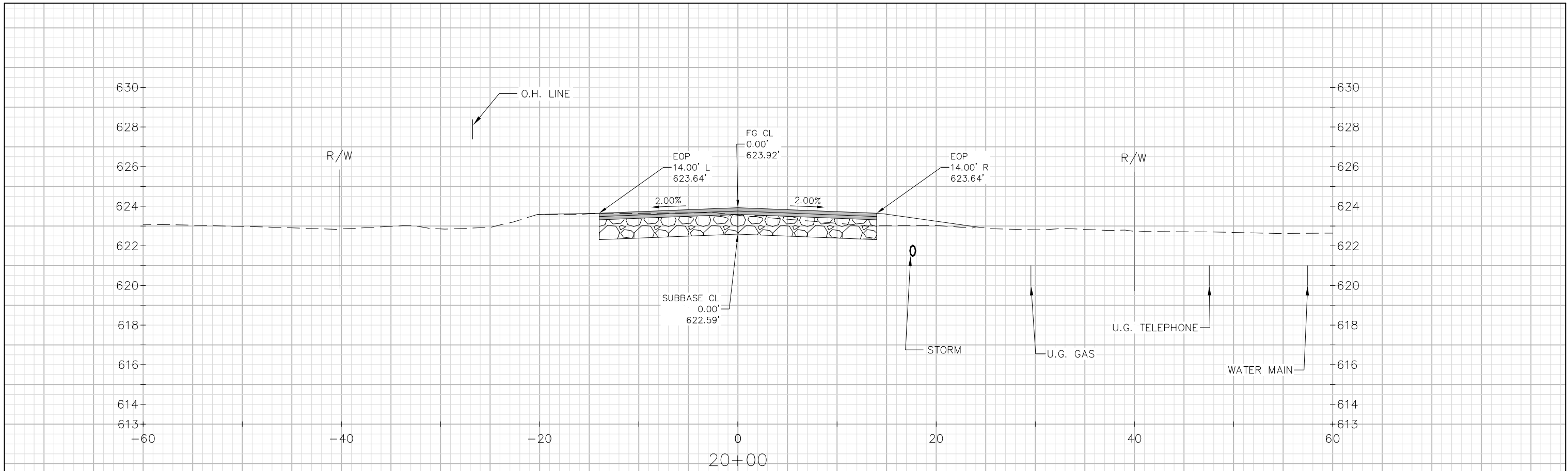
FILE NAME : R:\PRAIRIE DU CHIEN, CITY OF\170153 VILLA LOUIS ROAD IMPROVEMENTS\CADD\PDCH VILLA LOUIS ROAD BASE ENGINEERING.DWG | PLOT DATE : 6/22/2022 11:22 AM | PLOT BY : PAUL JUNION | PLOT NAME : | PLOT SCALE : ##### | WISDOT/CADDS SHEET 49

LAYOUT NAME - ####



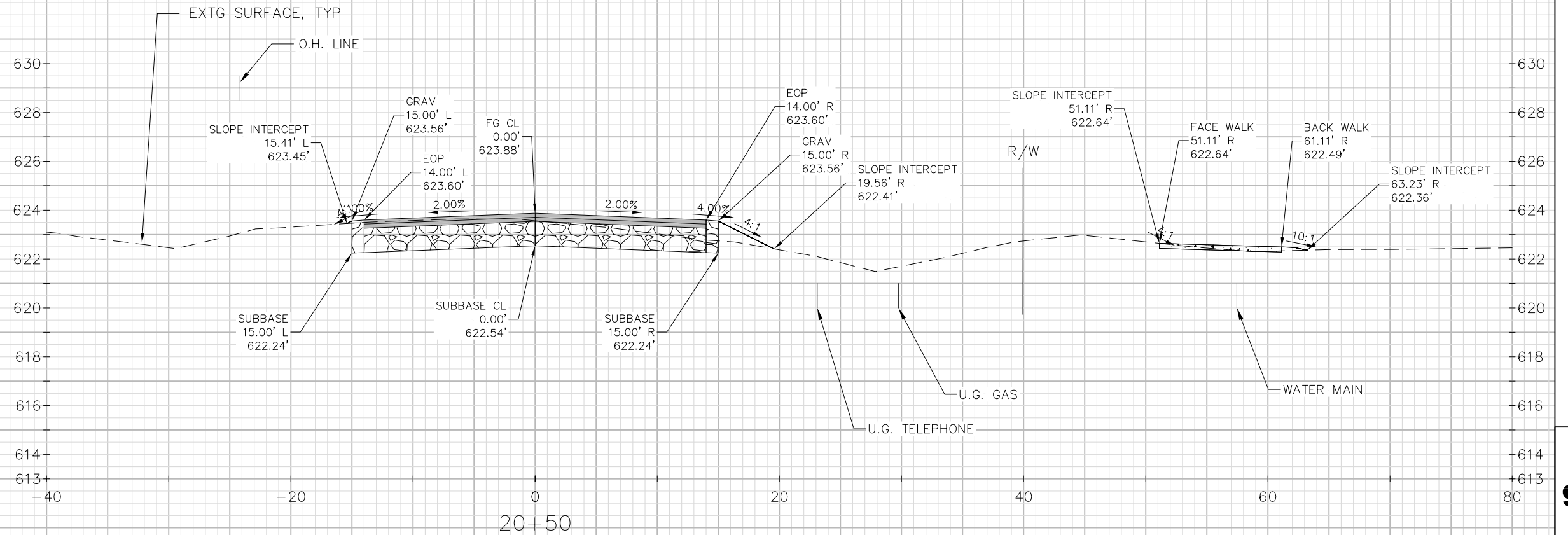
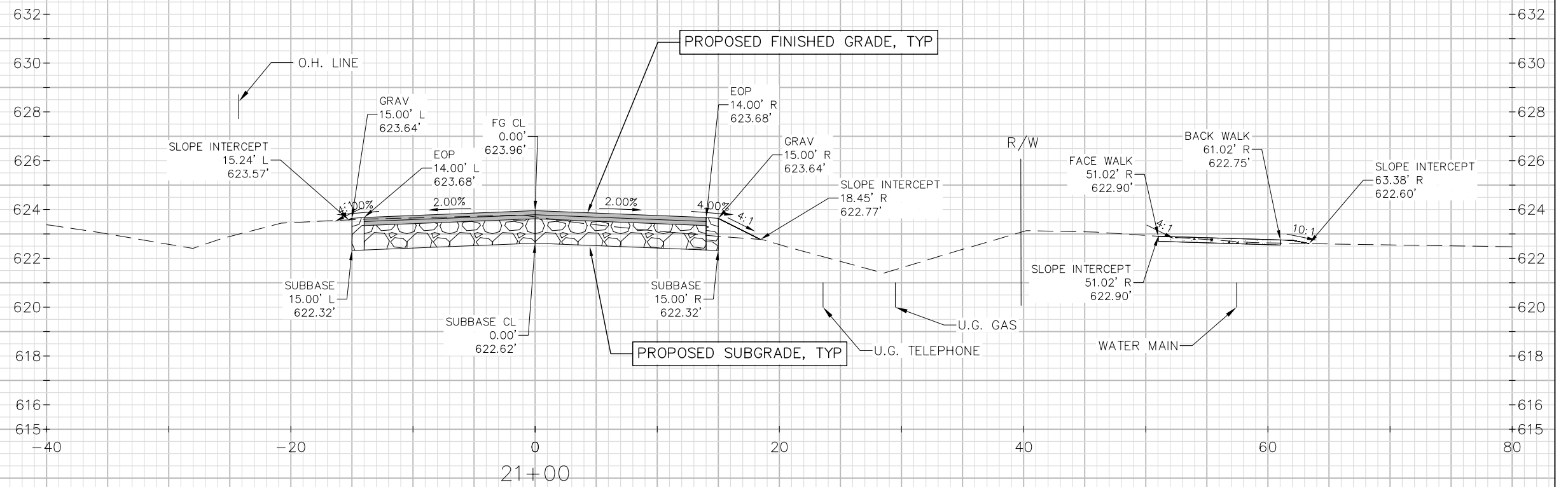






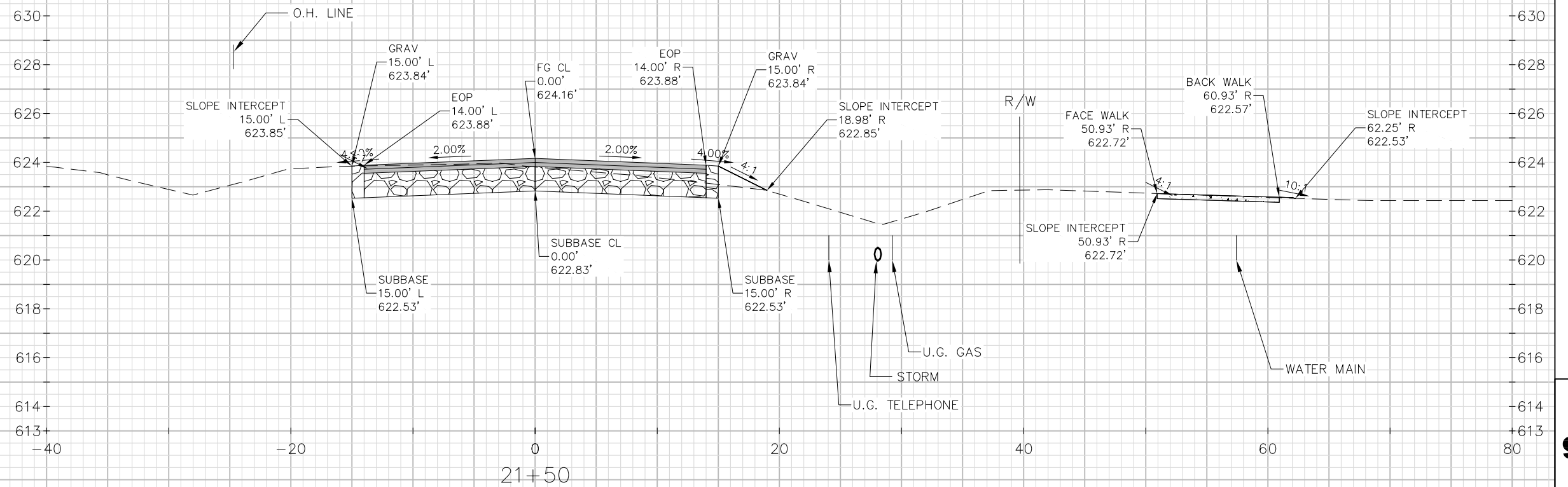
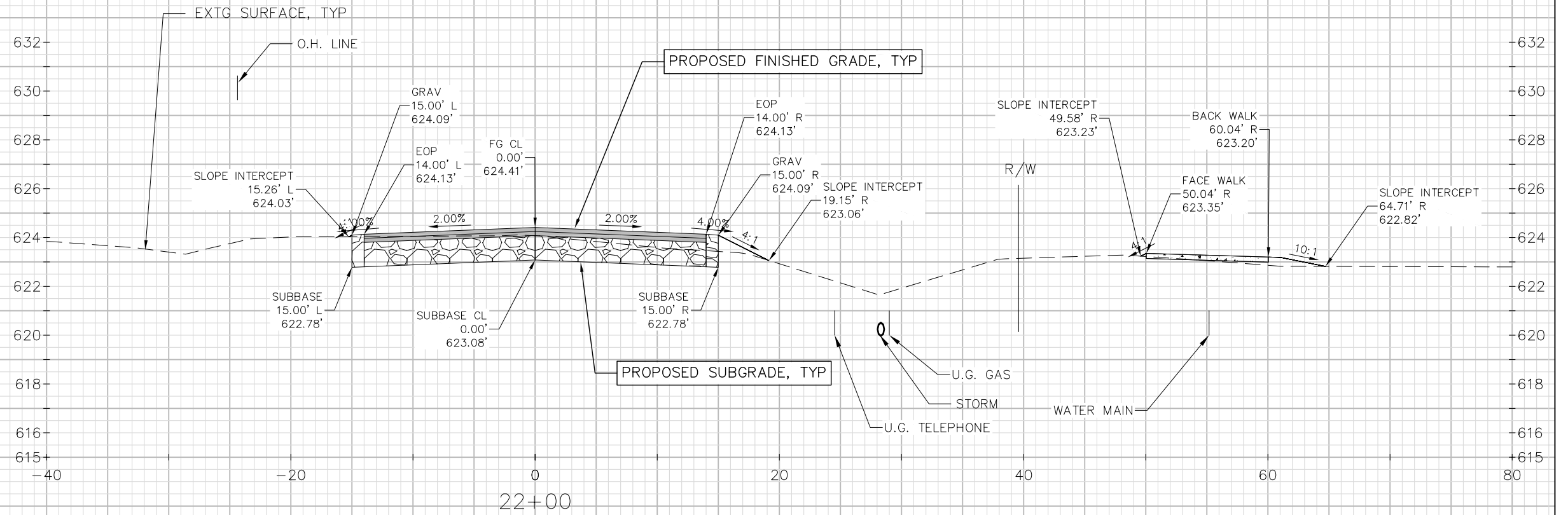
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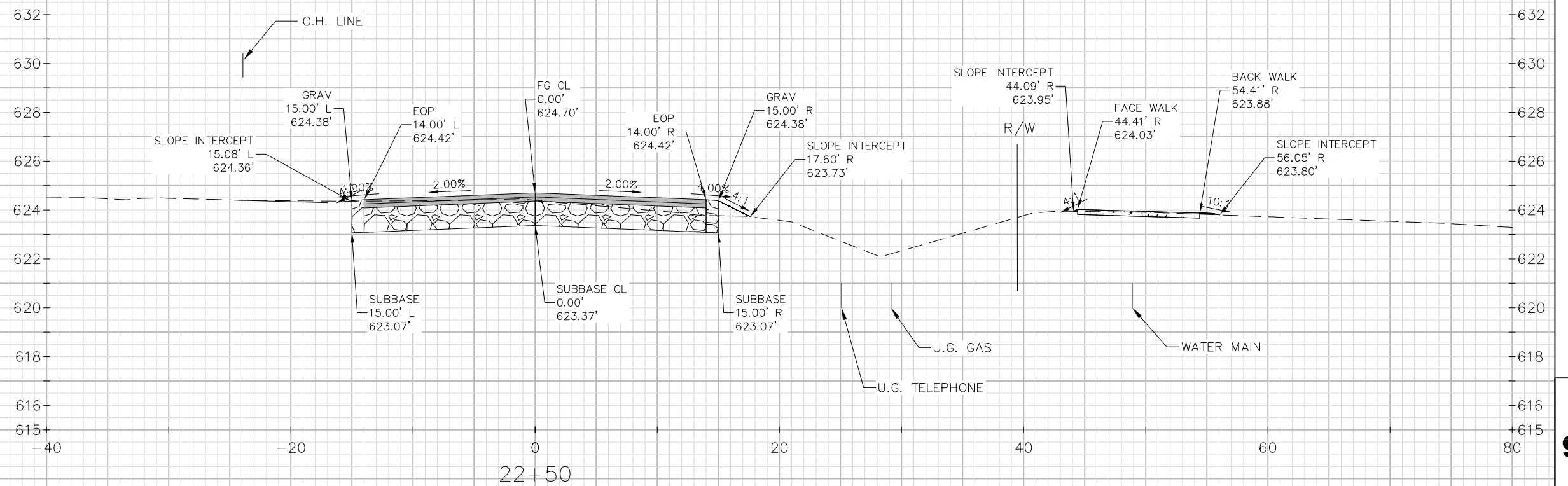
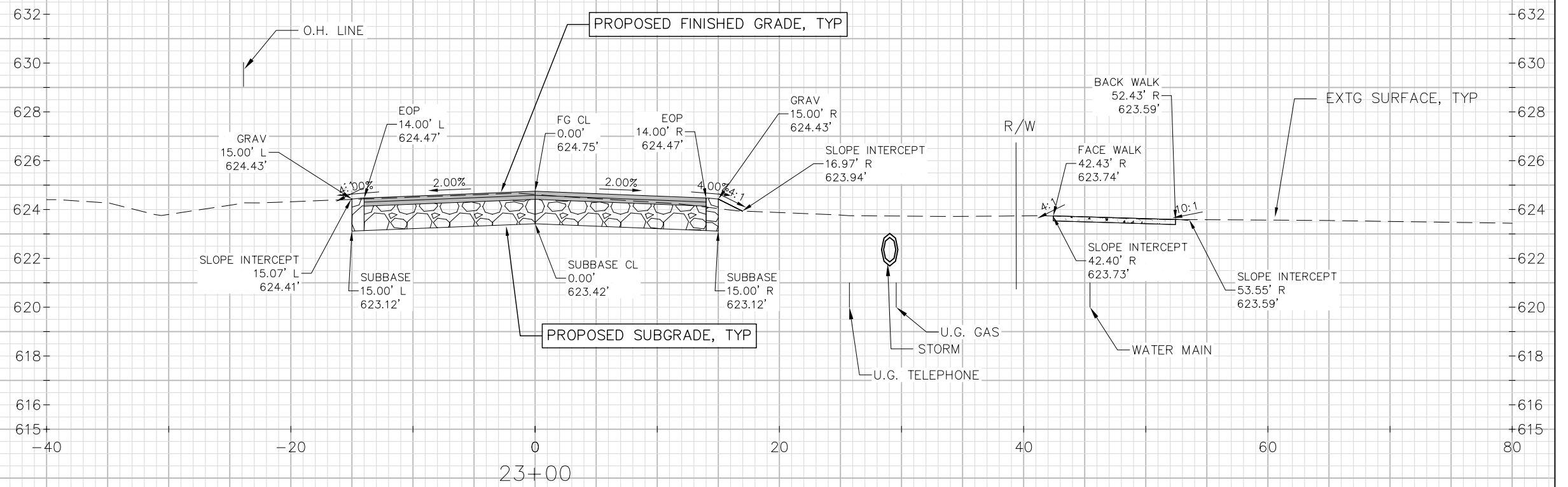
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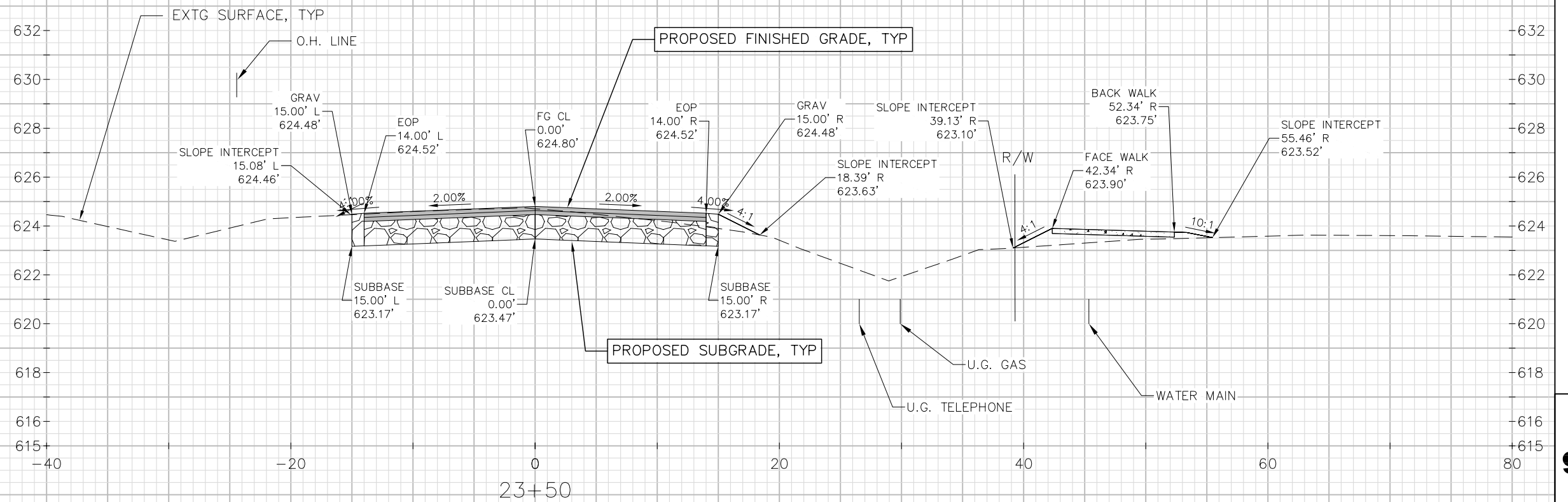
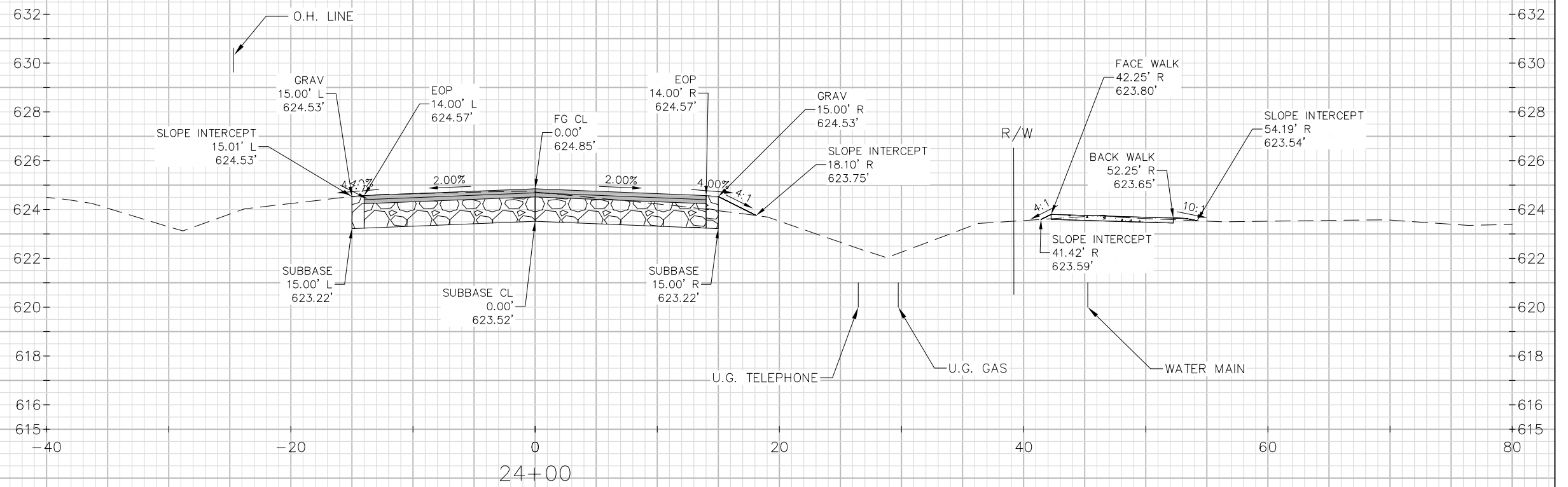
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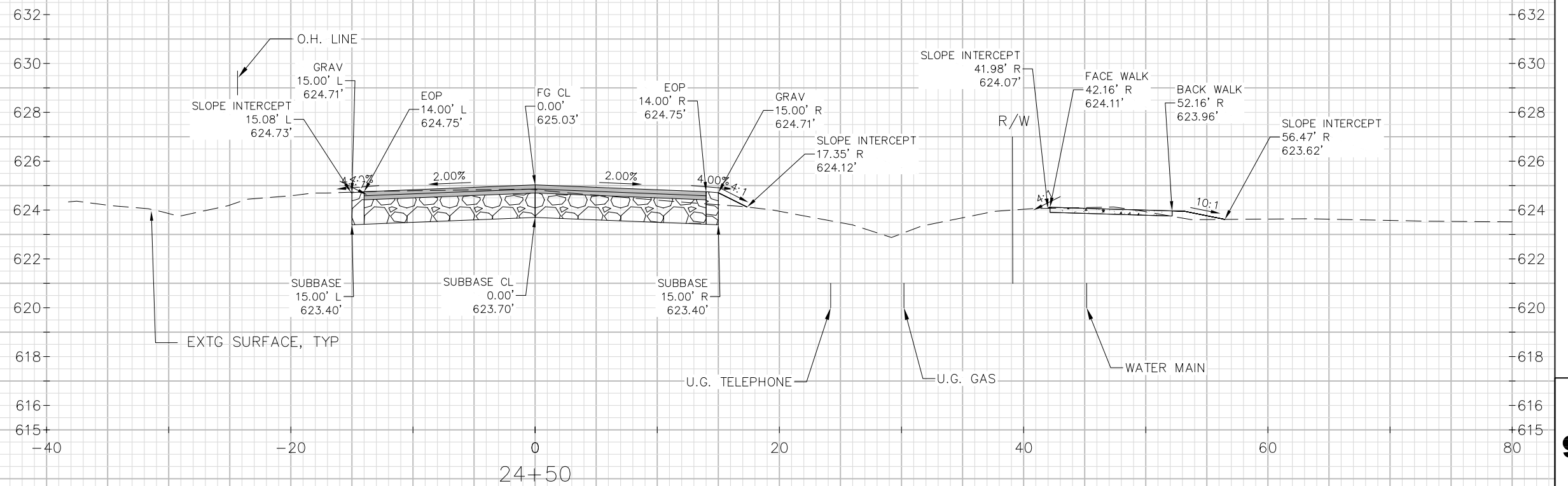
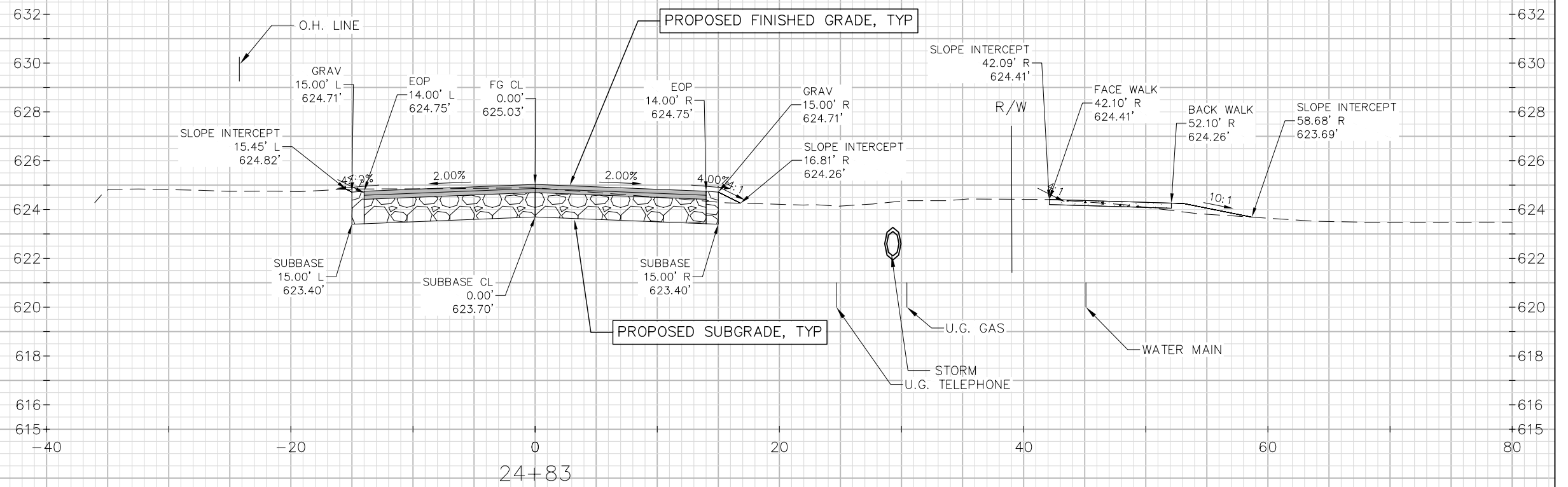
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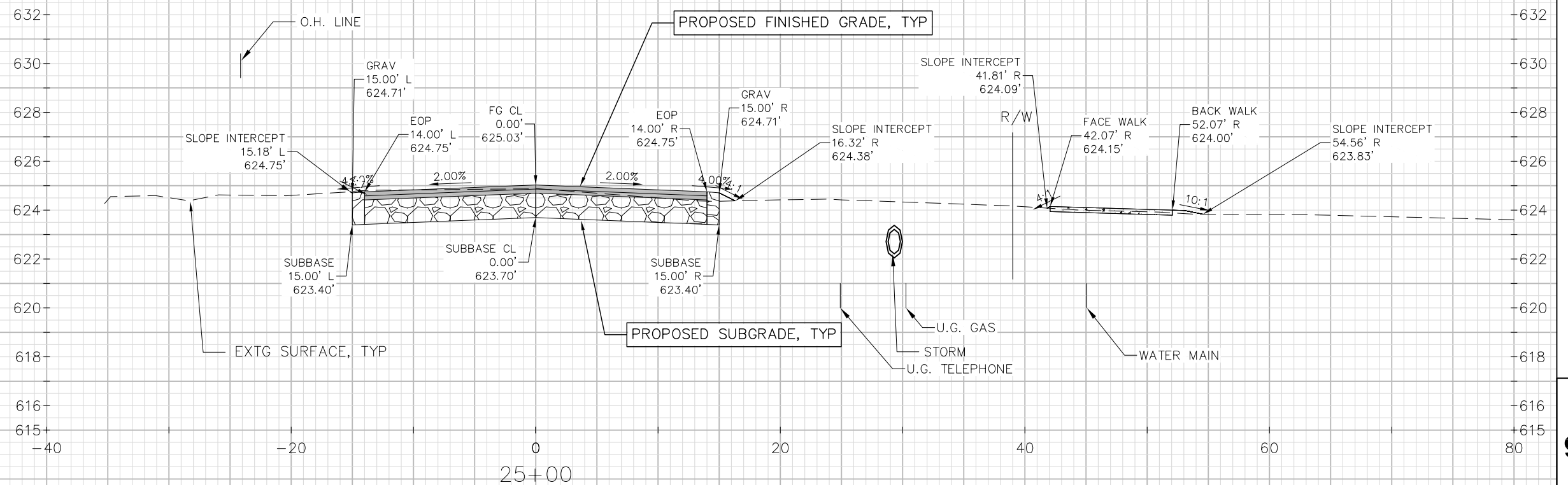
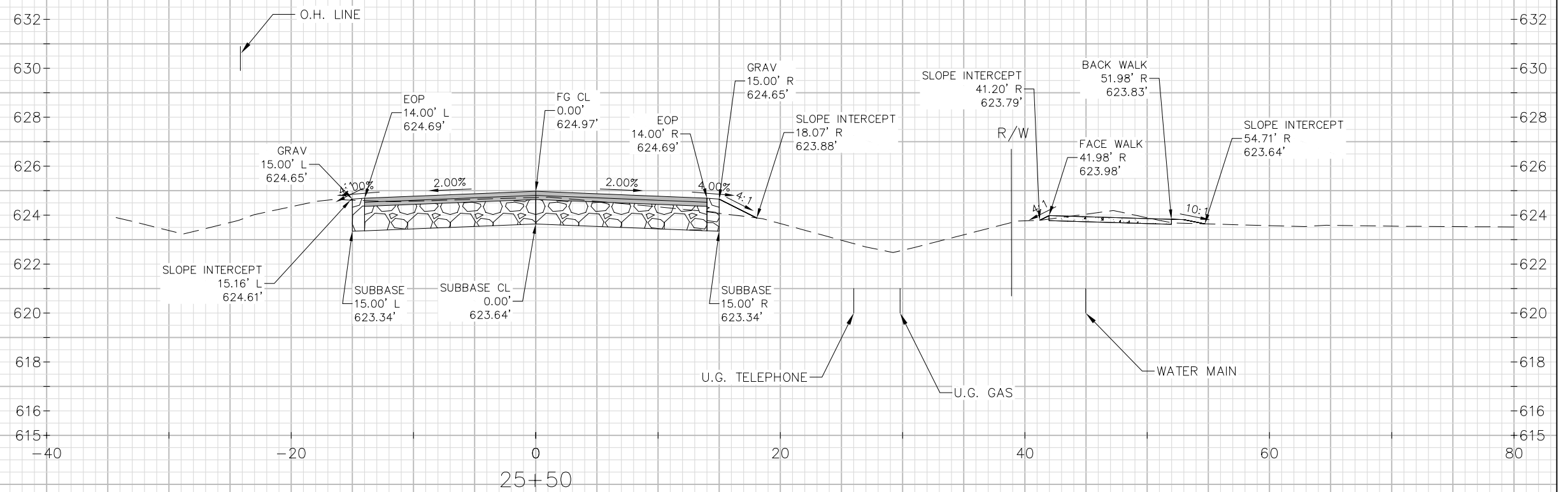
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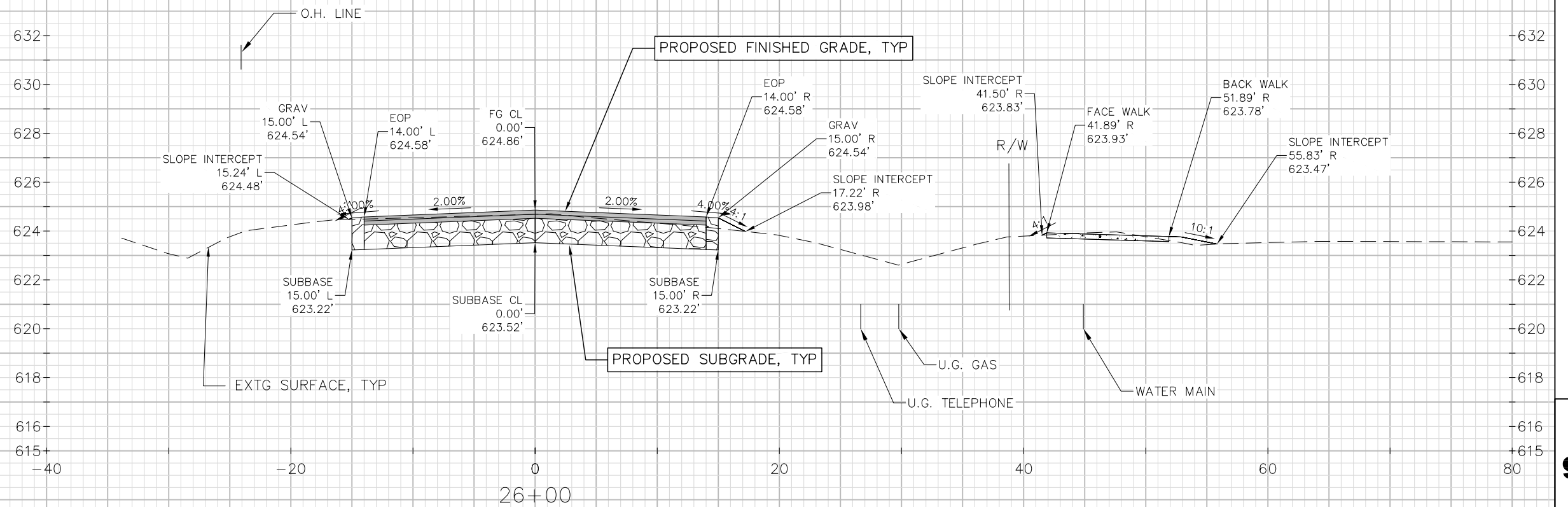
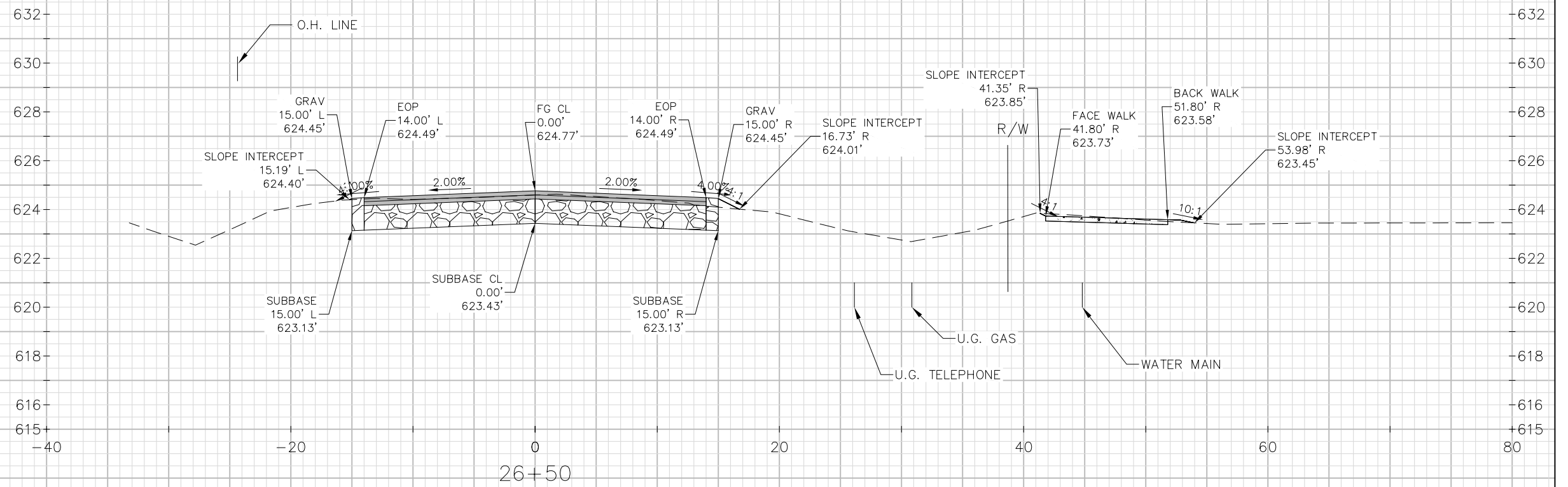
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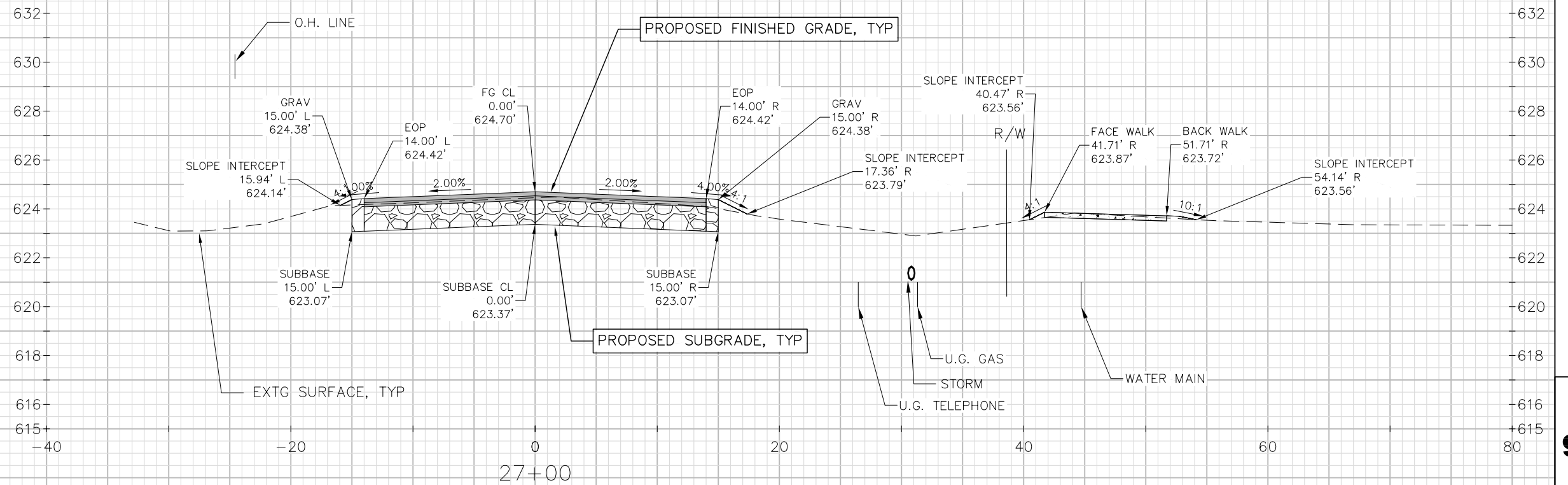
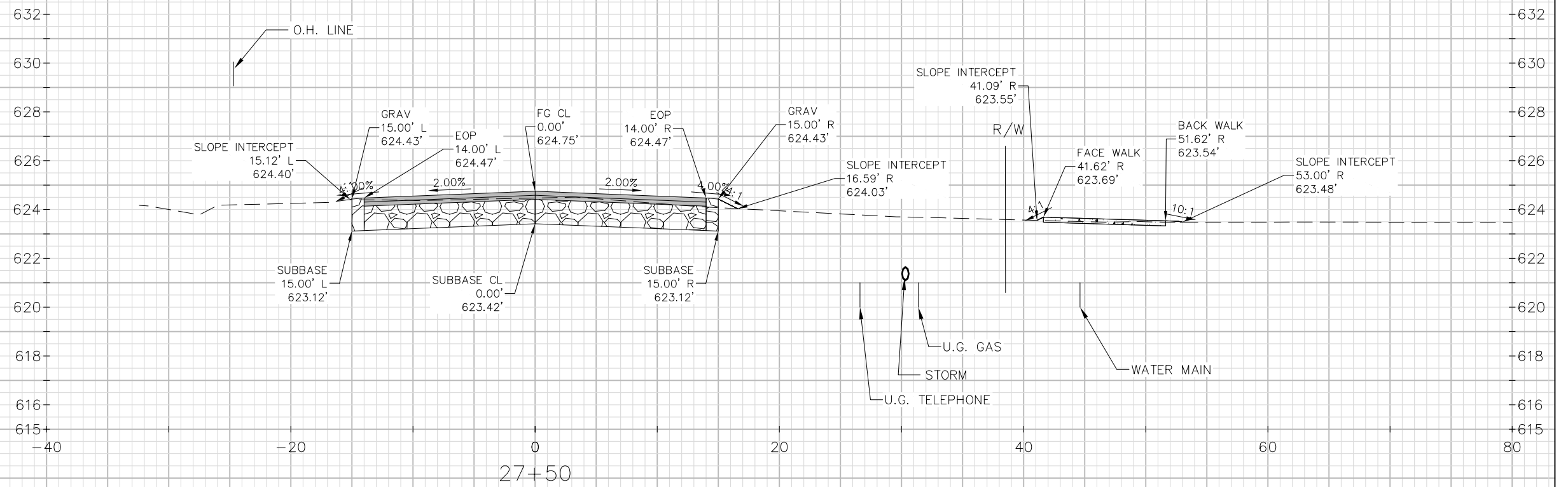
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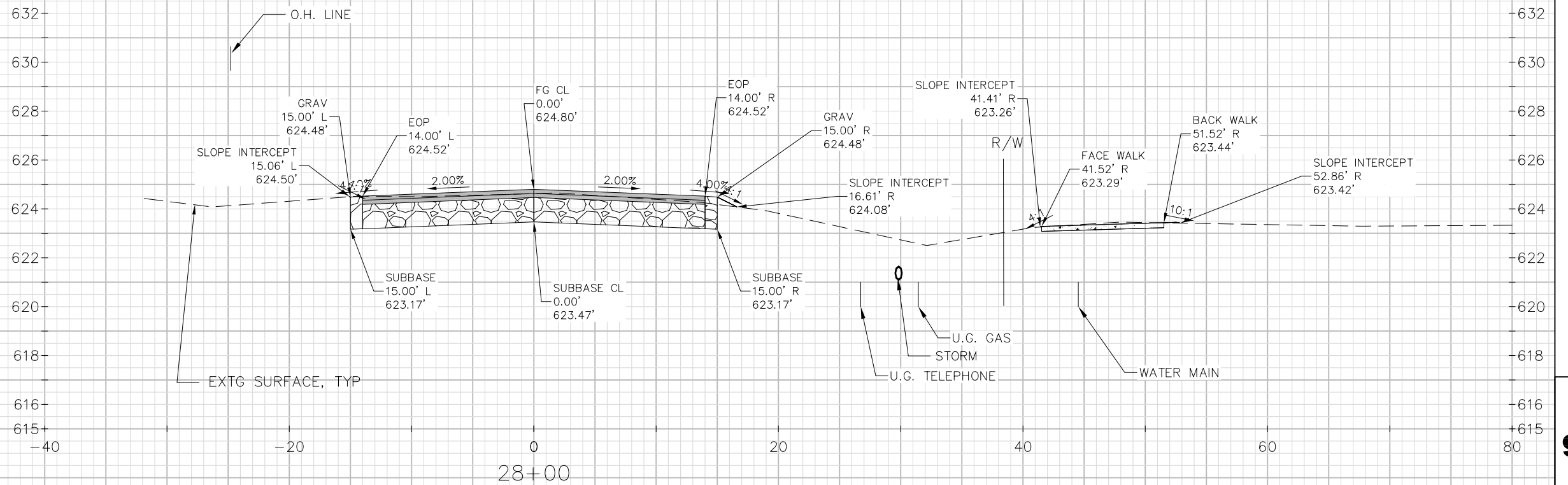
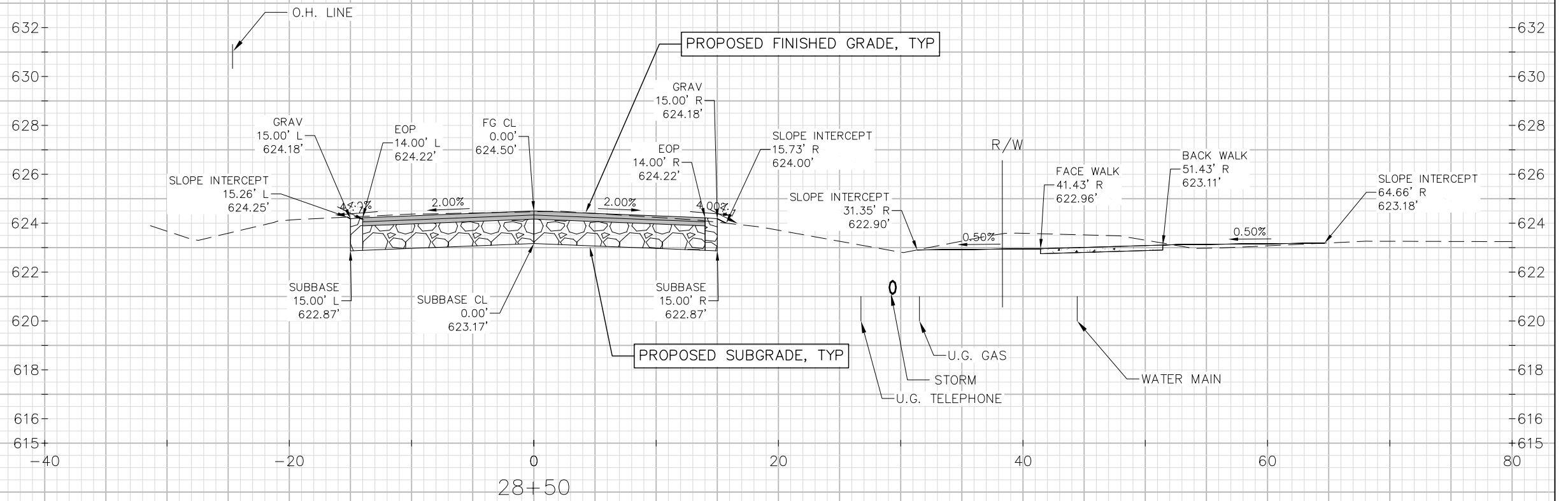




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PROJECT NO: 5997-00-41

HWY: VILLA LOUIS ROAD

COUNTY: CRAWFORD

CROSS SECTIONS: VILLA LOUIS ROAD

SHEET

E

FILE NAME : R:\PRAIRIE DU CHIEN, CITY OF\170153 VILLA LOUIS ROAD IMPROVEMENTS\CADD\PDCH VILLA LOUIS ROAD BASE ENGINEERING.DWG  
LAYOUT NAME - ####

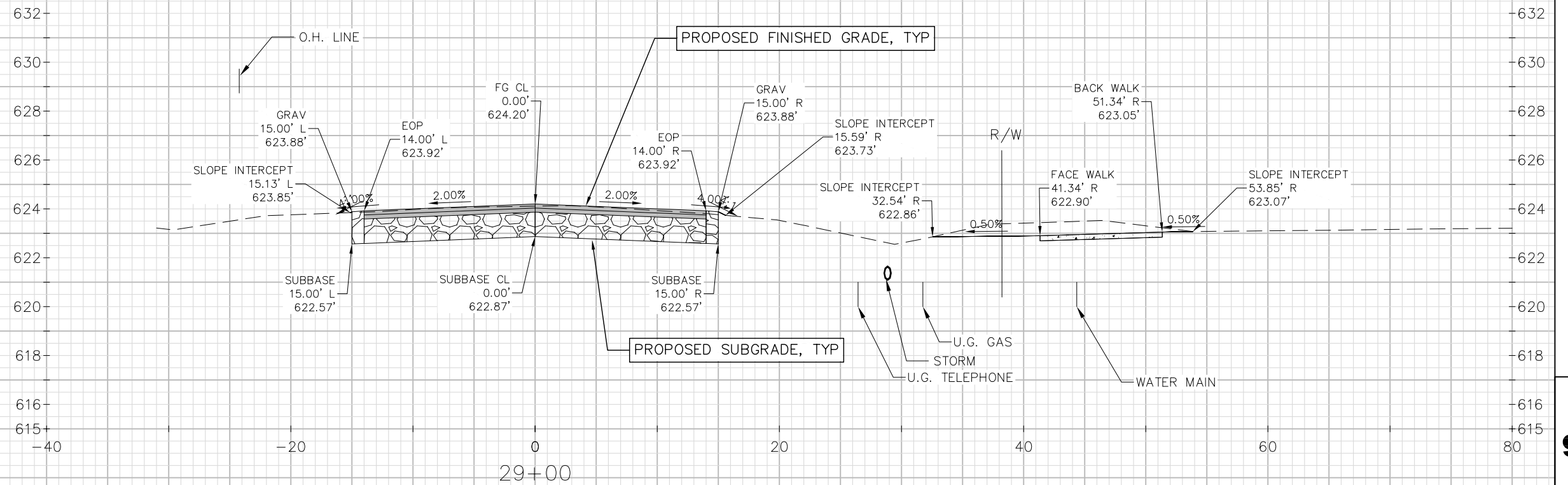
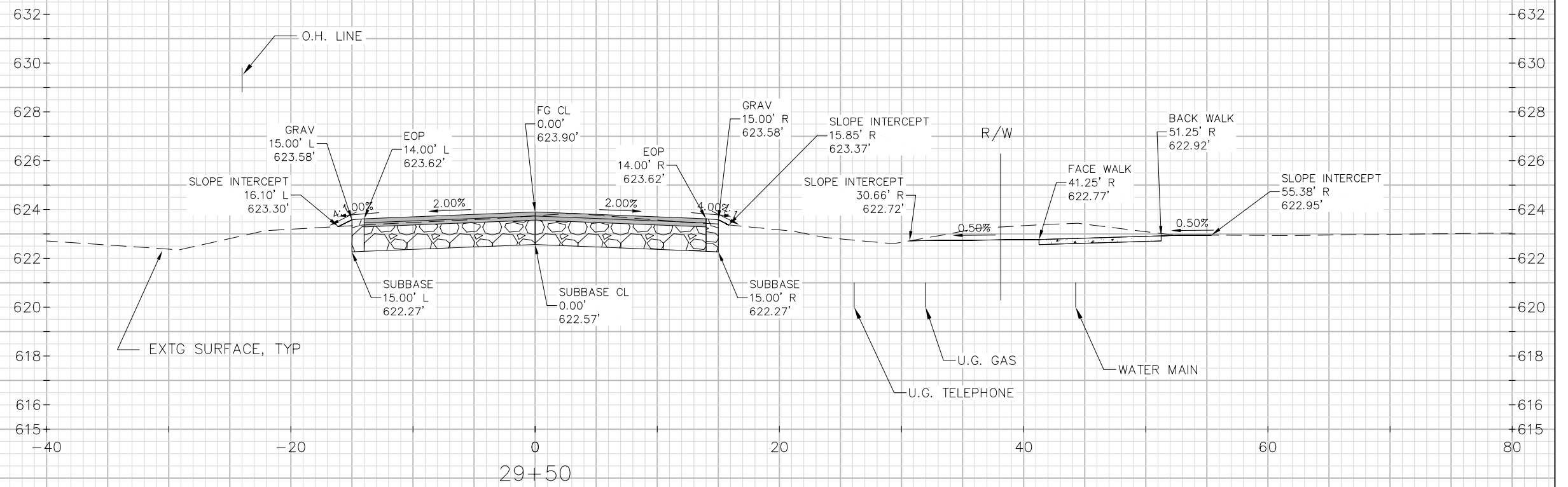
PLOT DATE : 6/22/2022 11:23 AM

PLOT BY : PAUL JUNION

PLOT NAME :

PLOT SCALE : #####

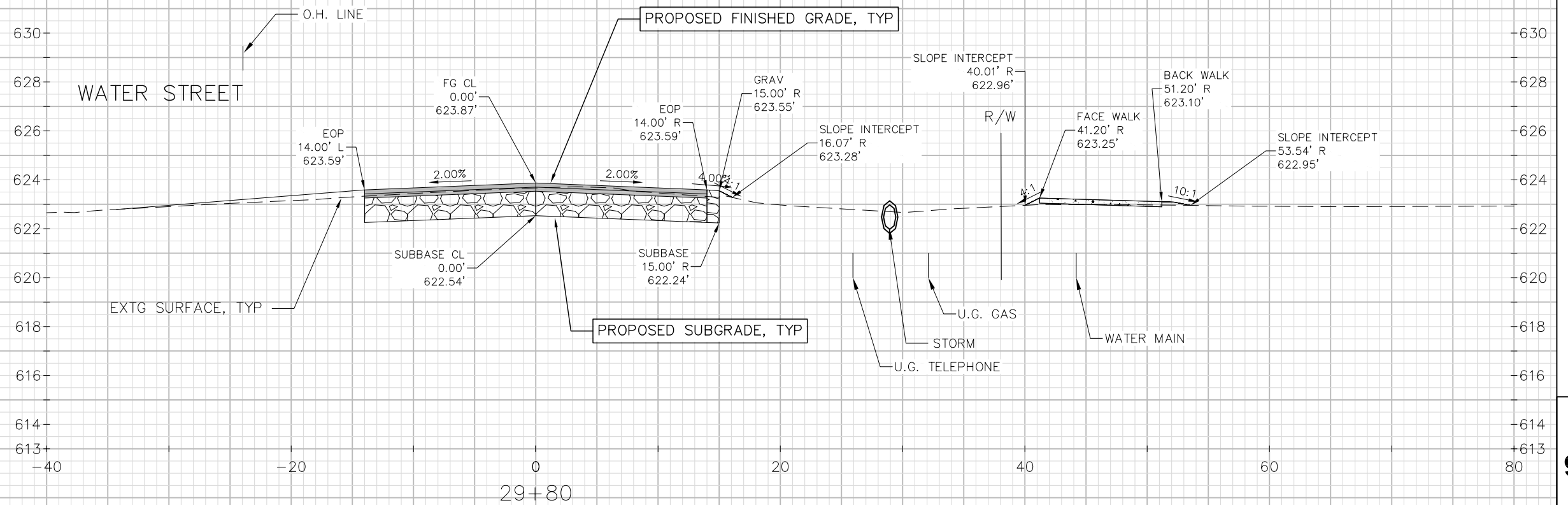
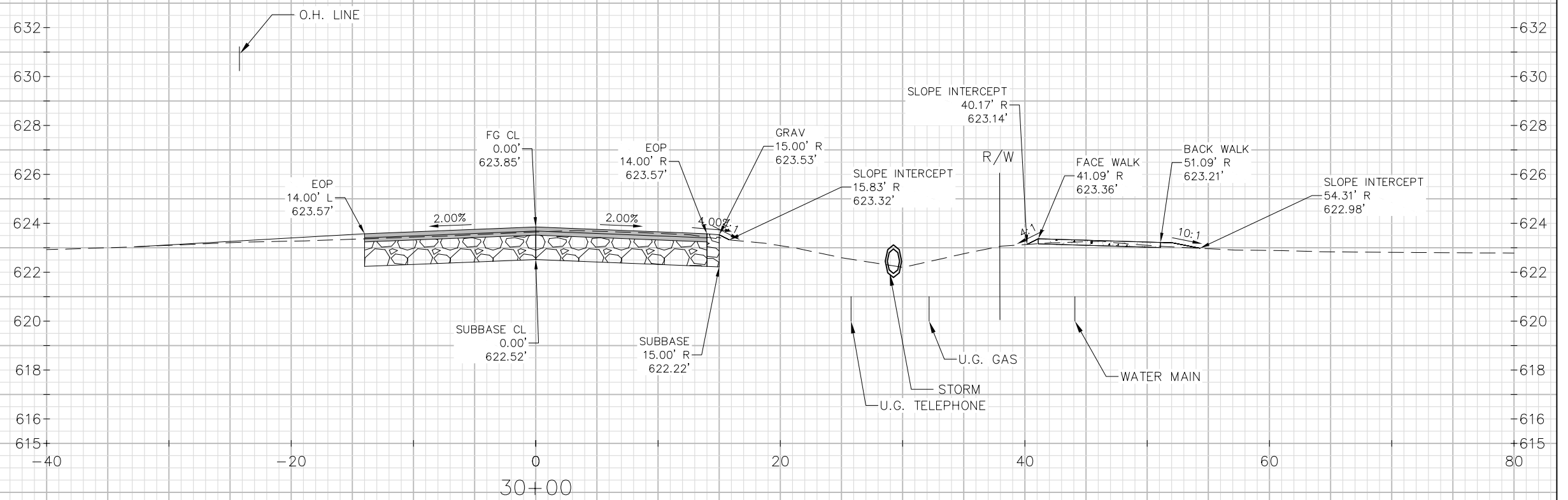
WISDOT/CADS SHEET 49

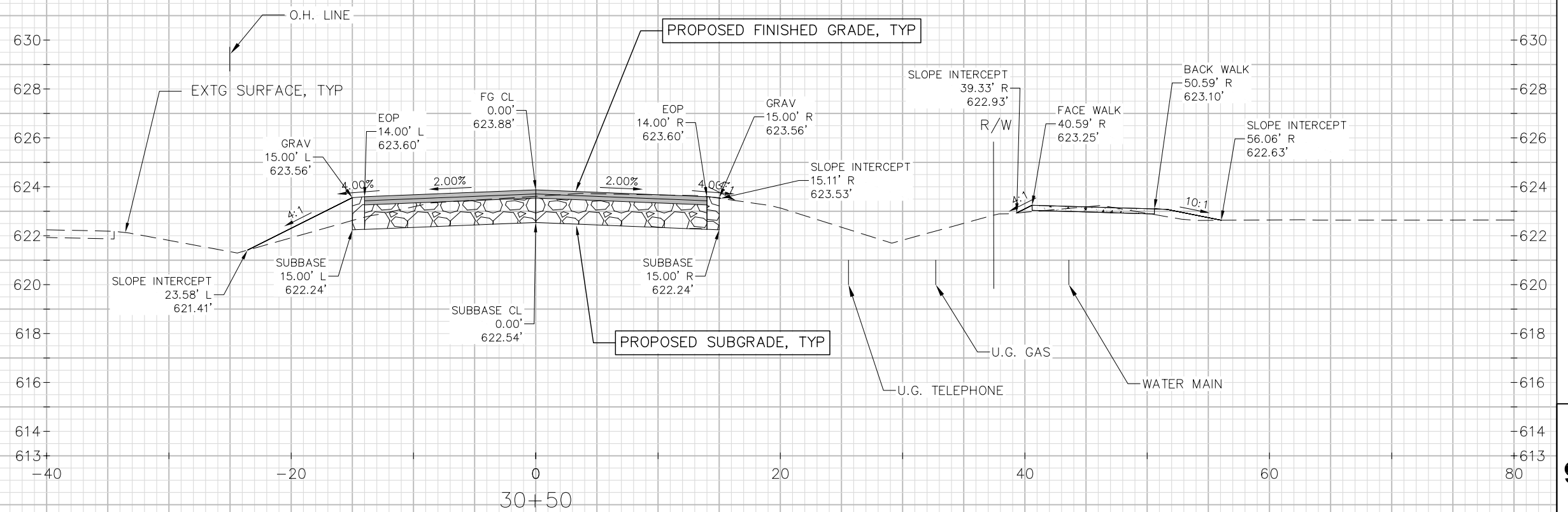
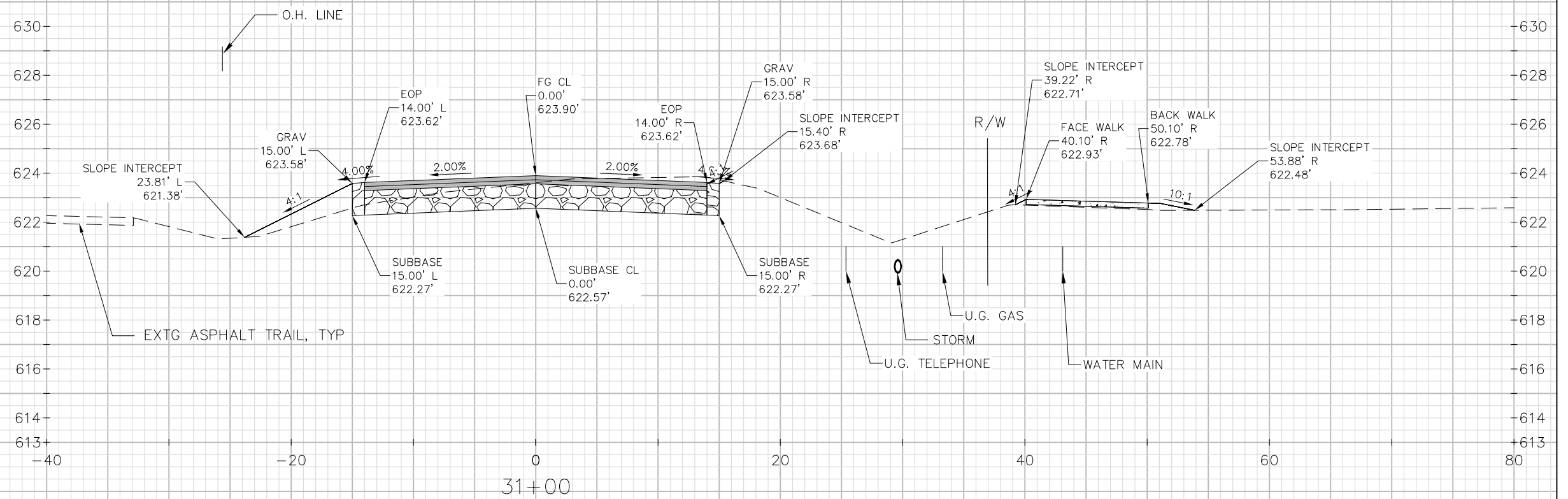


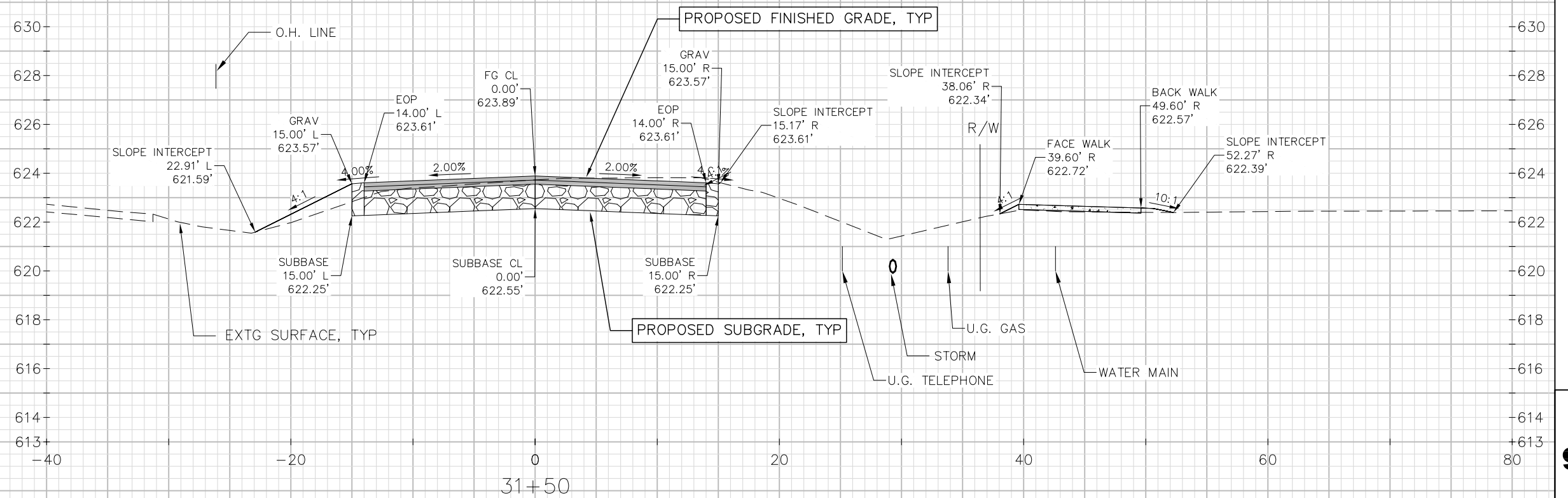
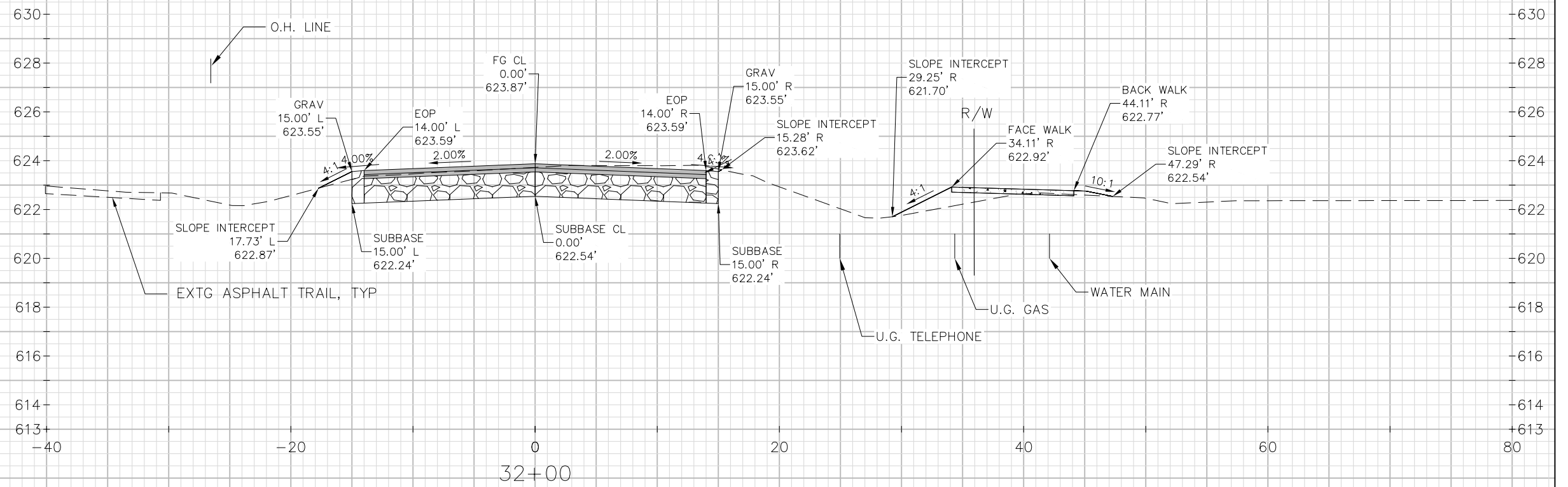
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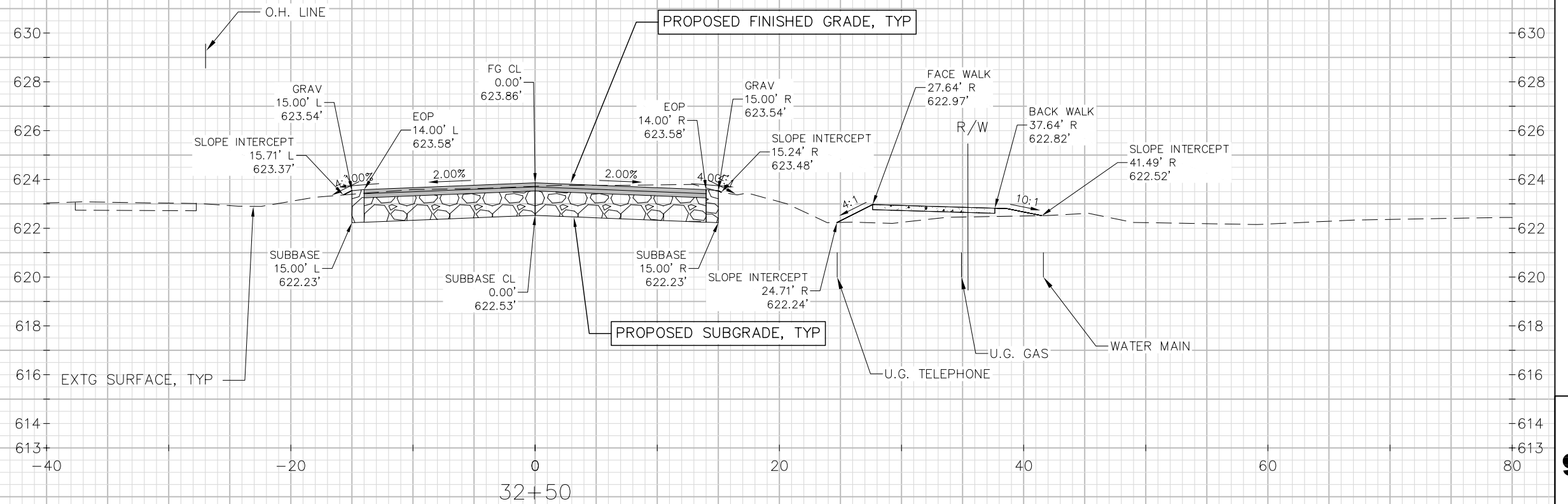
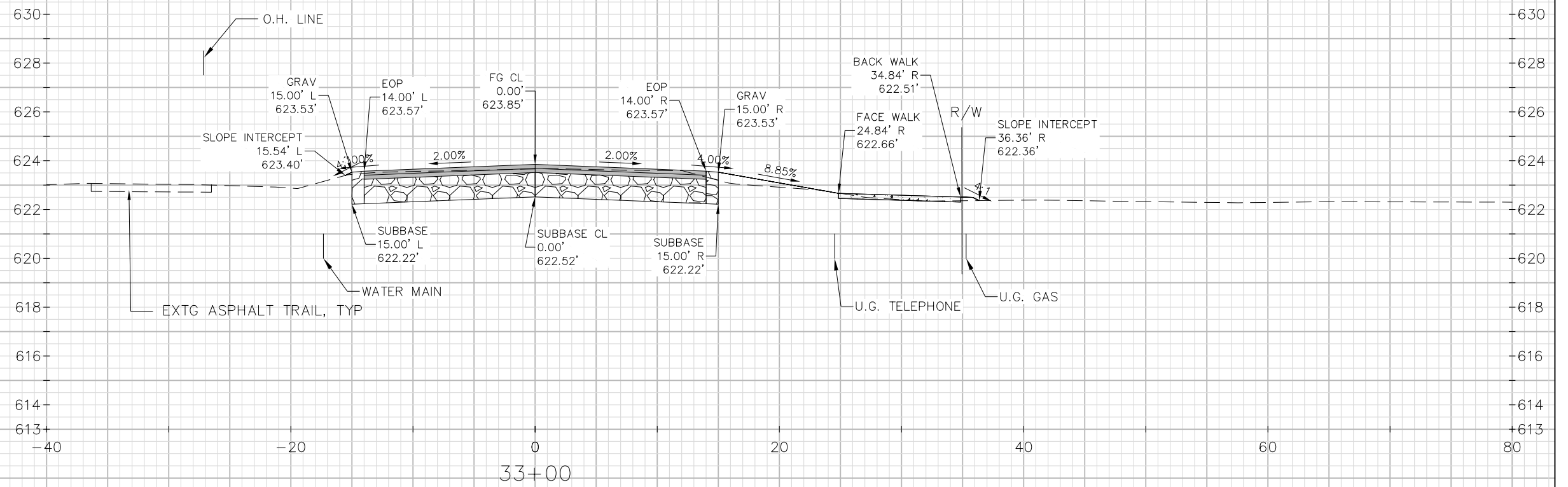
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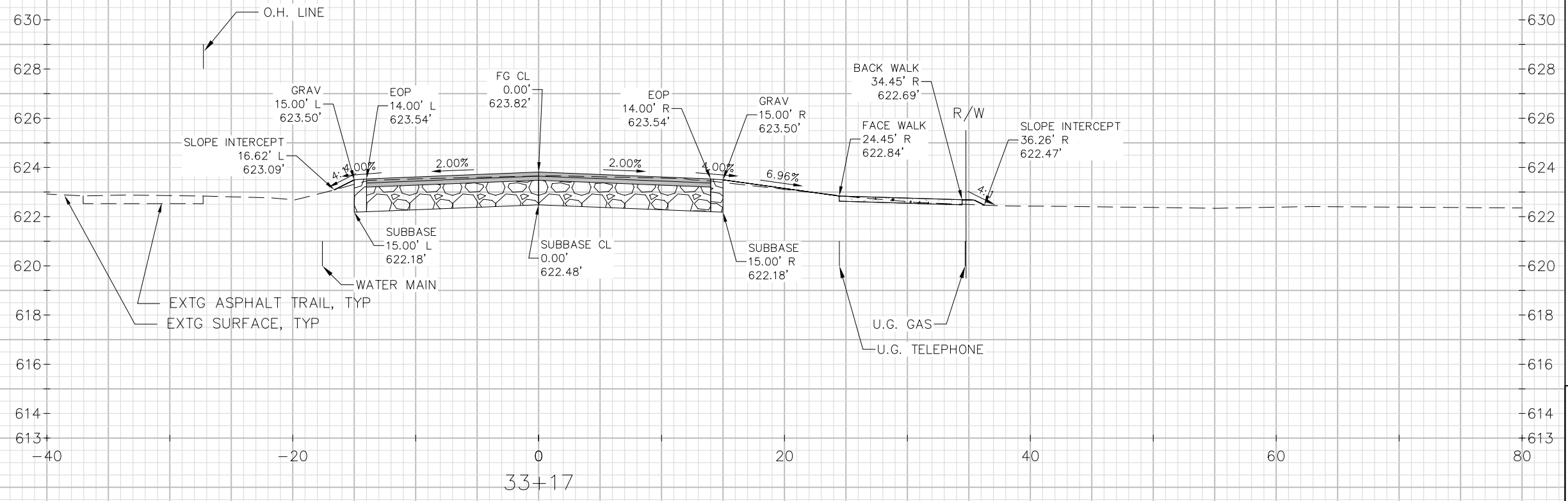
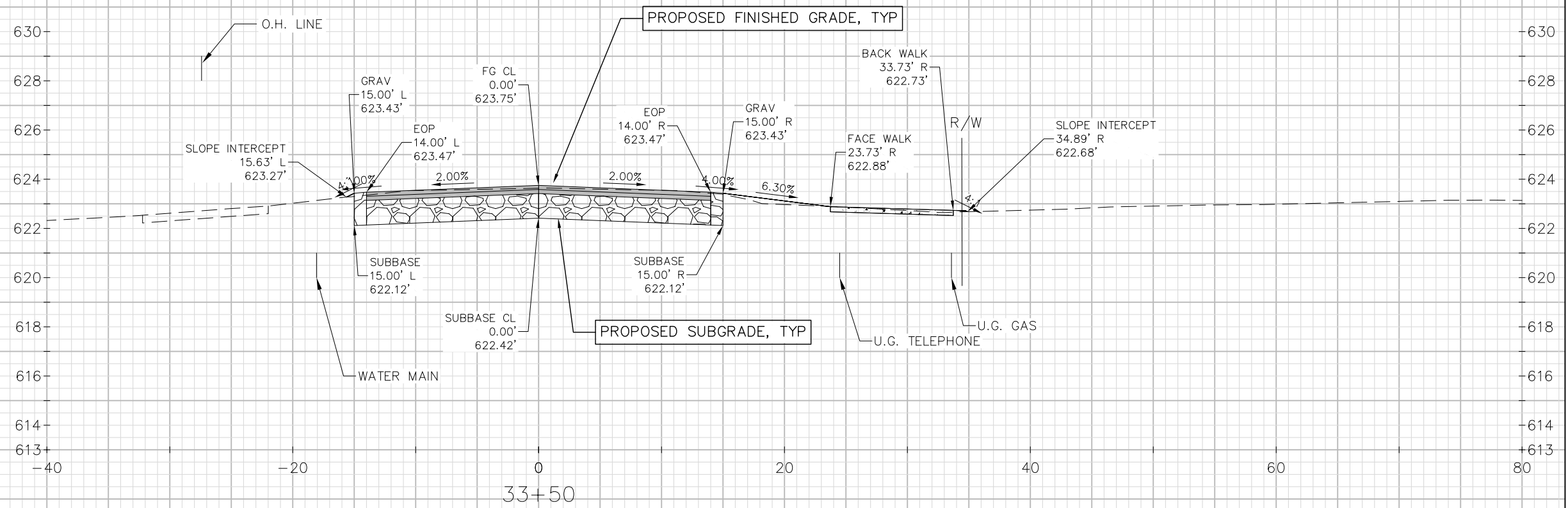






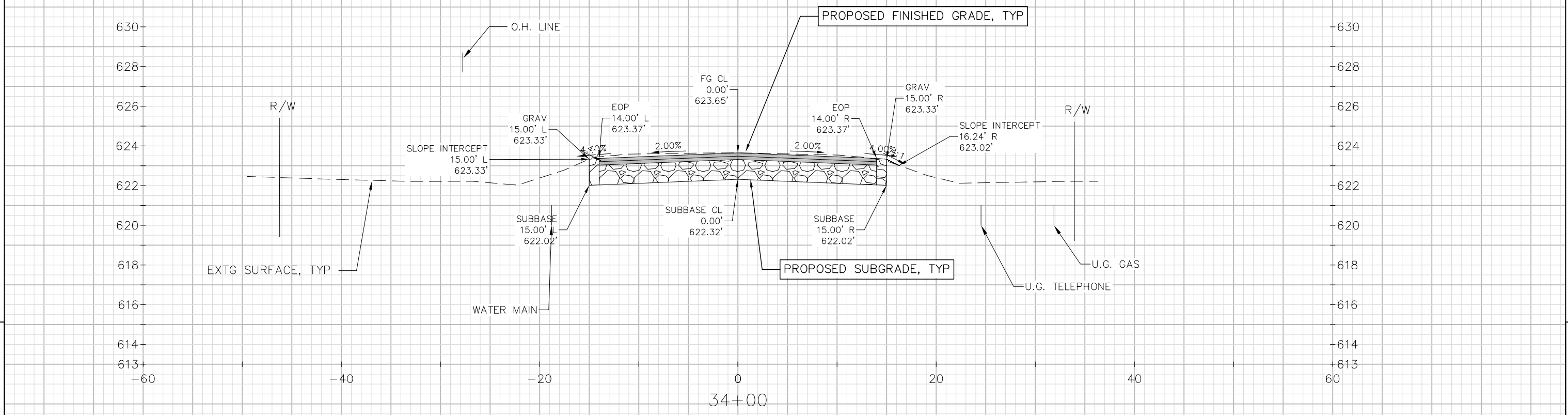
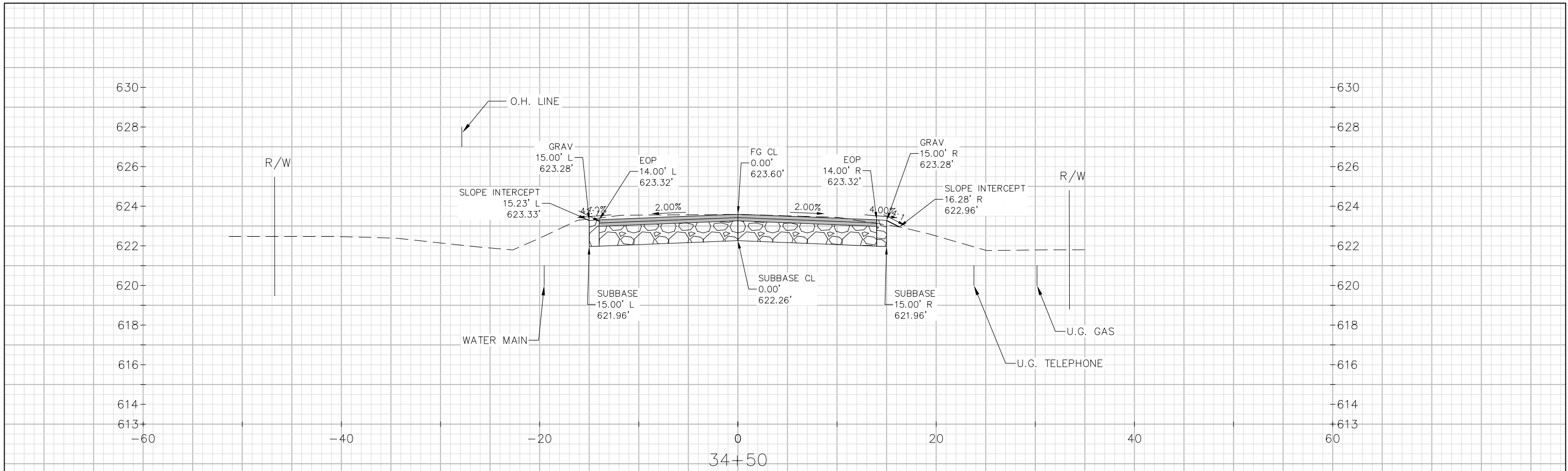
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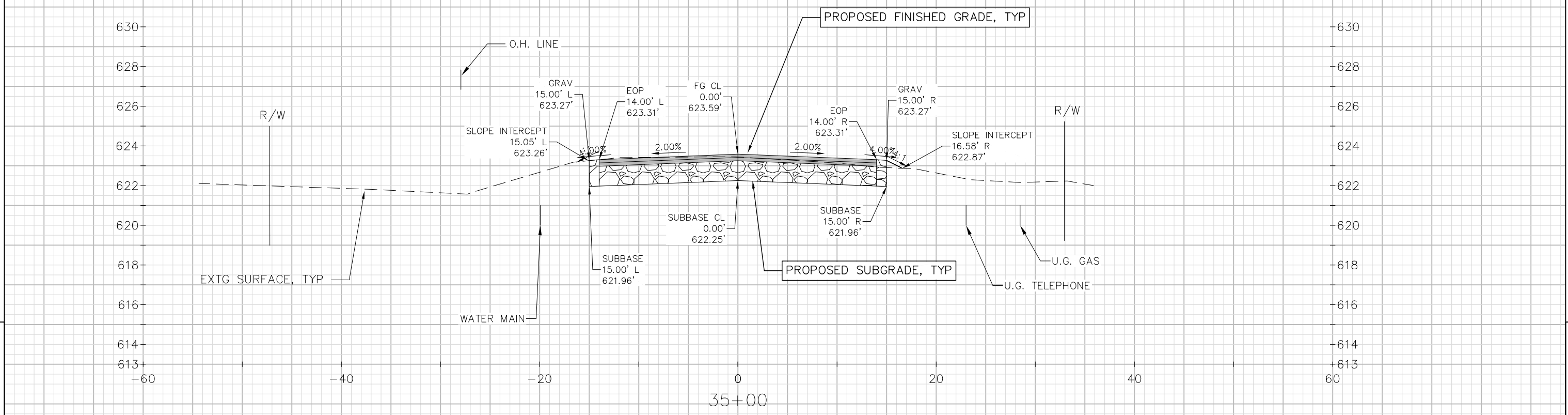
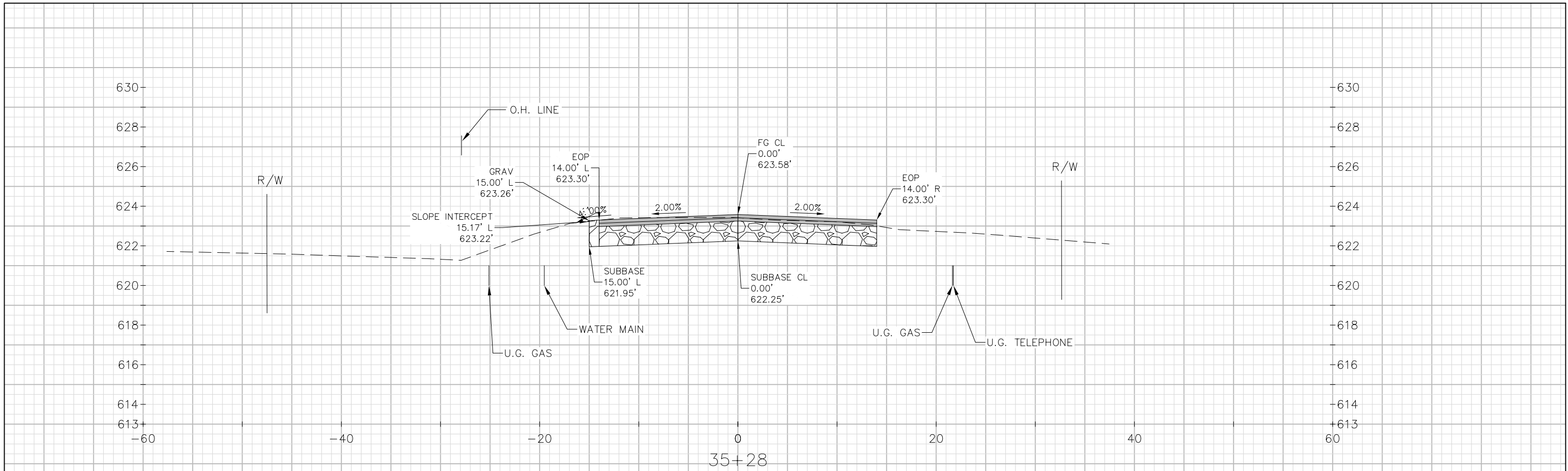
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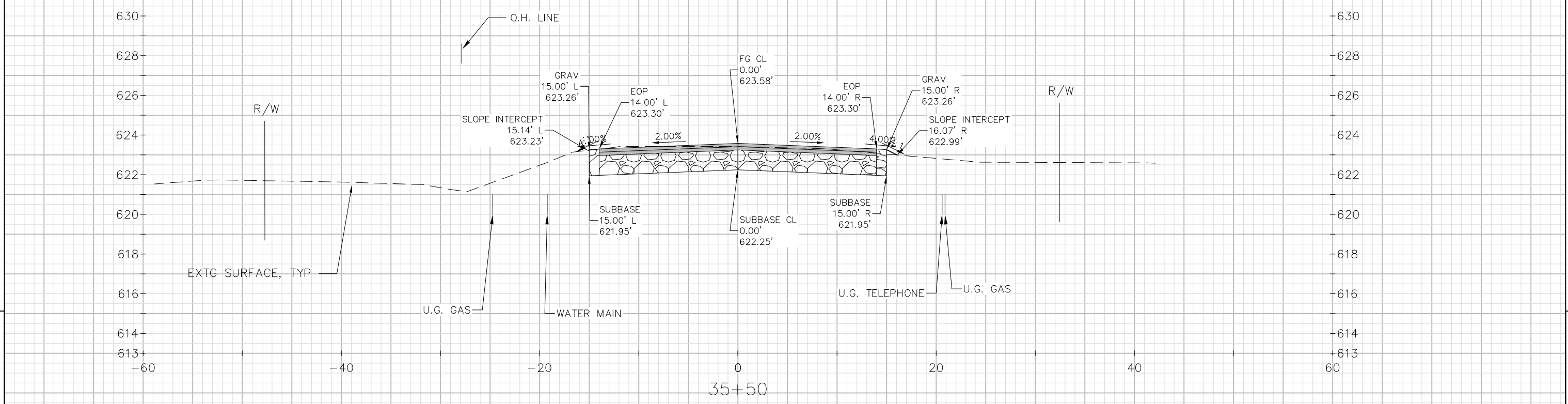
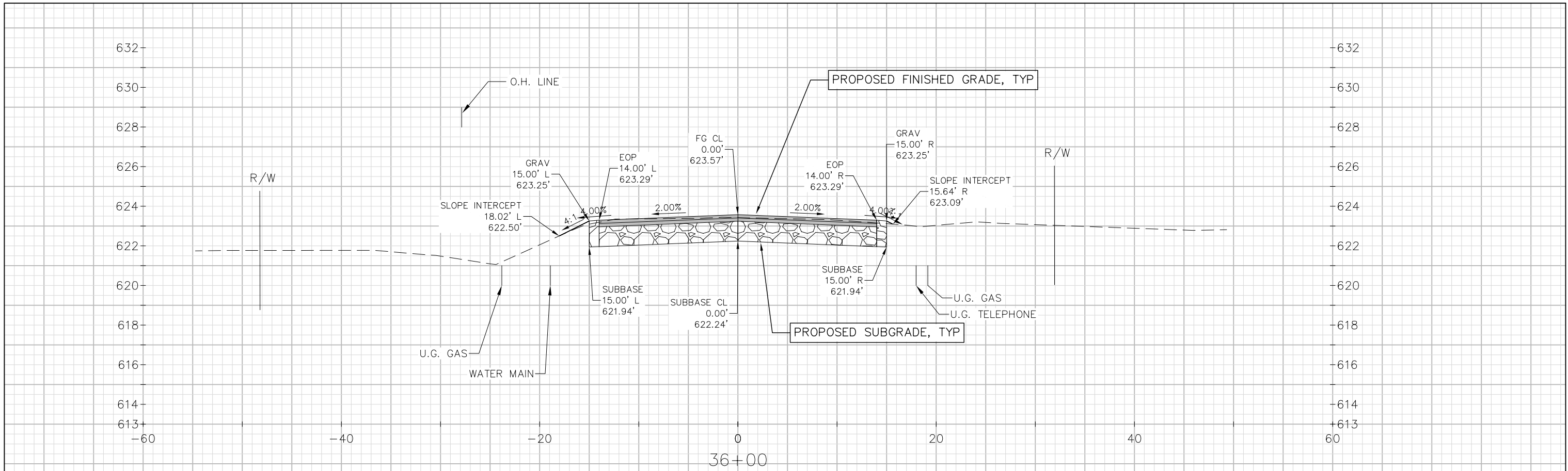


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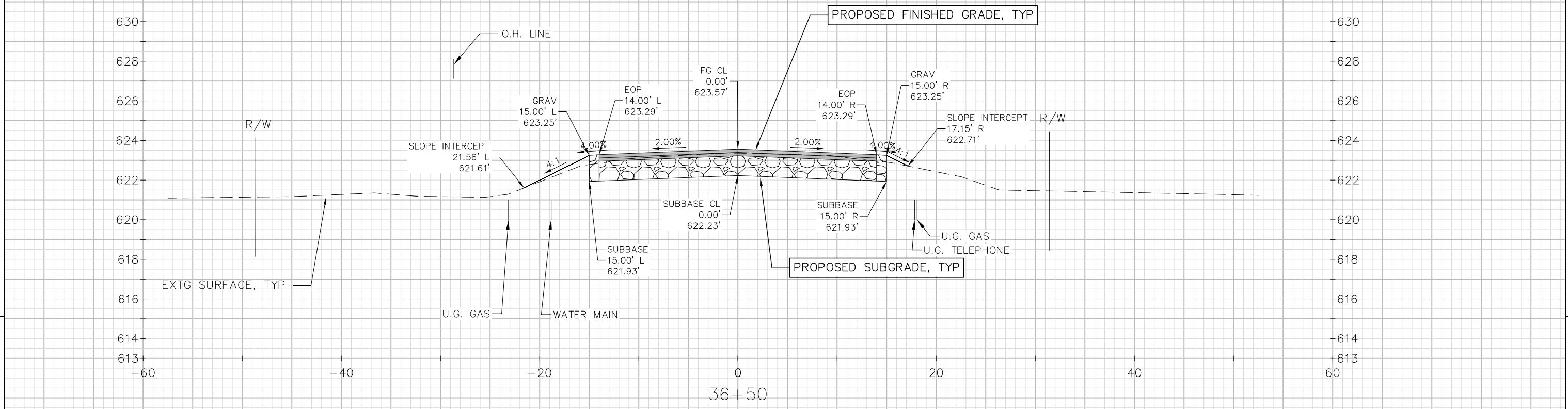
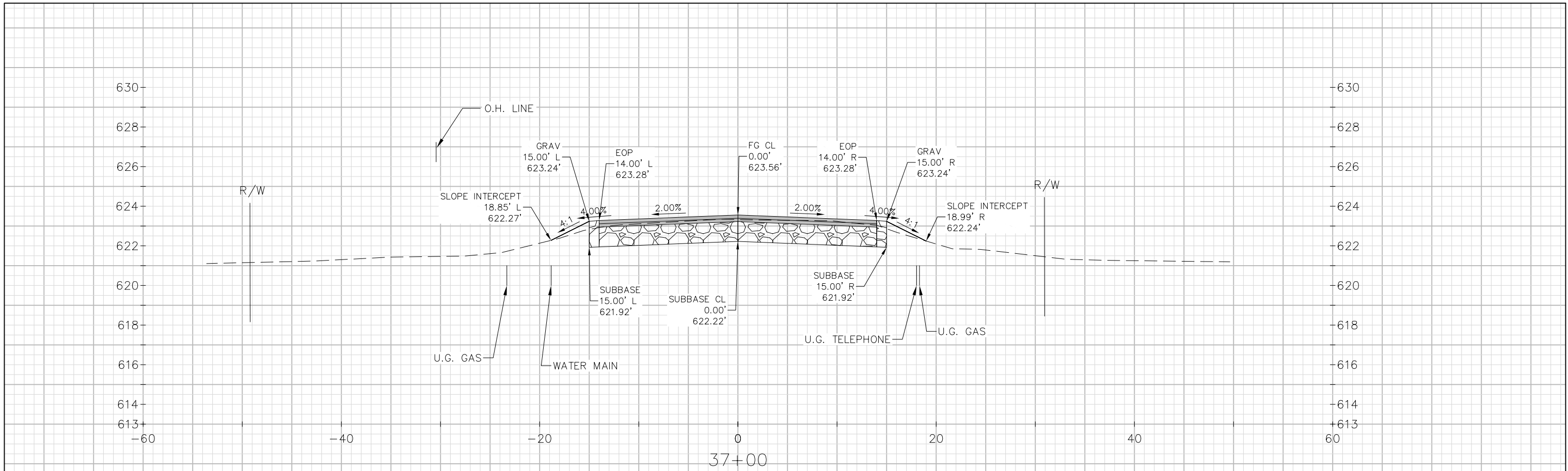
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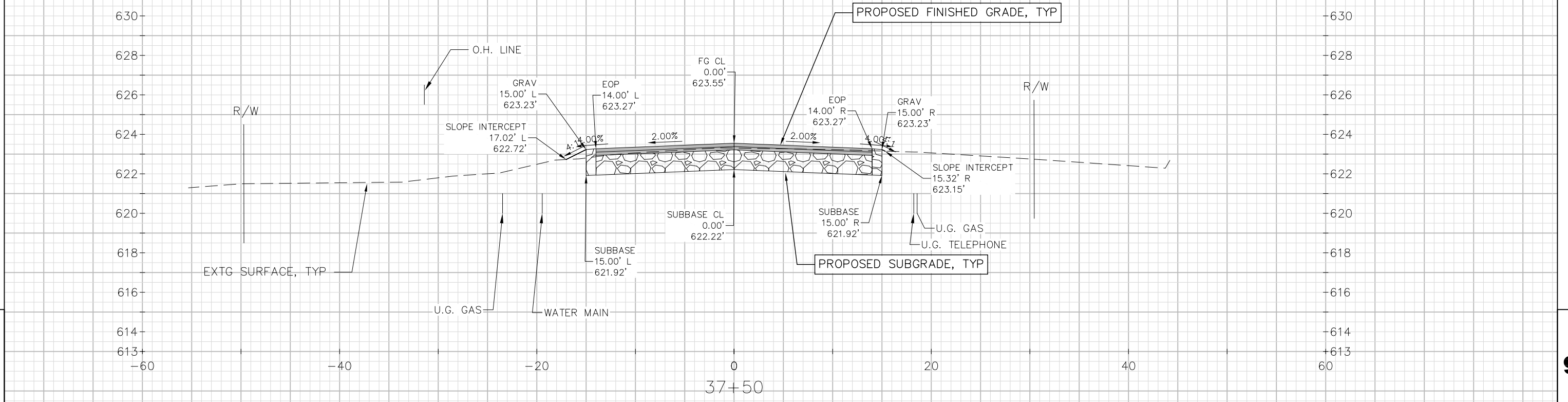
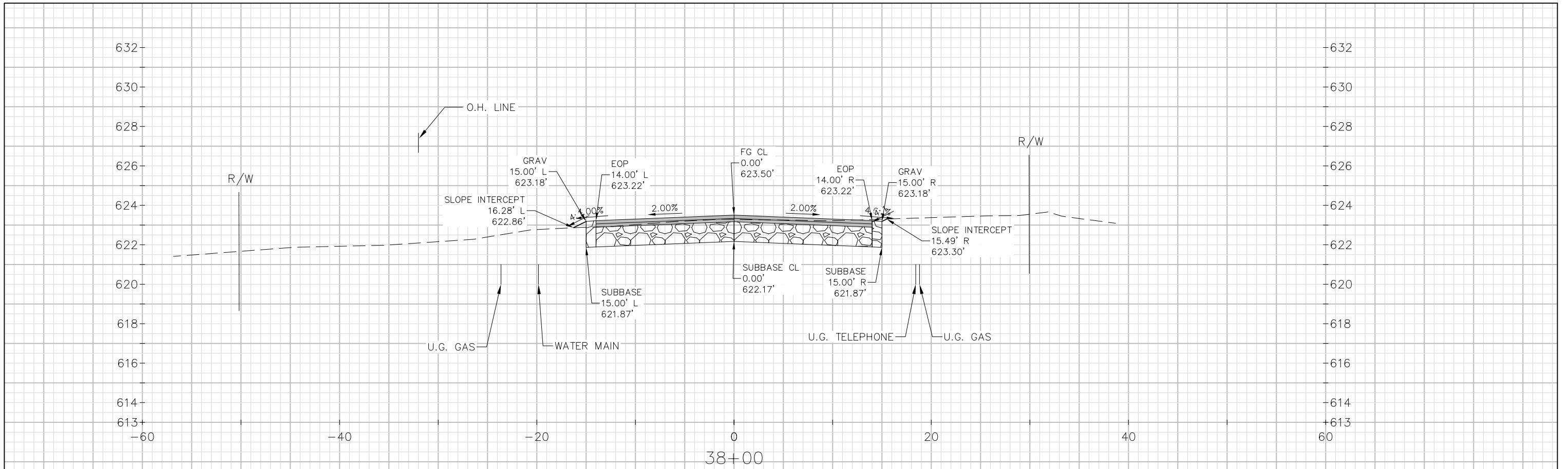


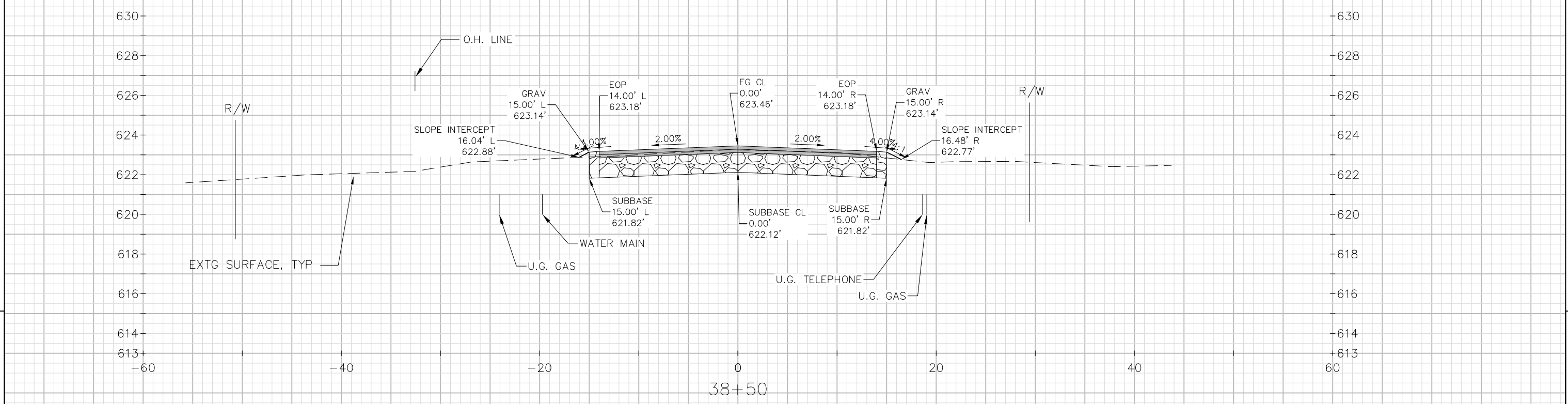
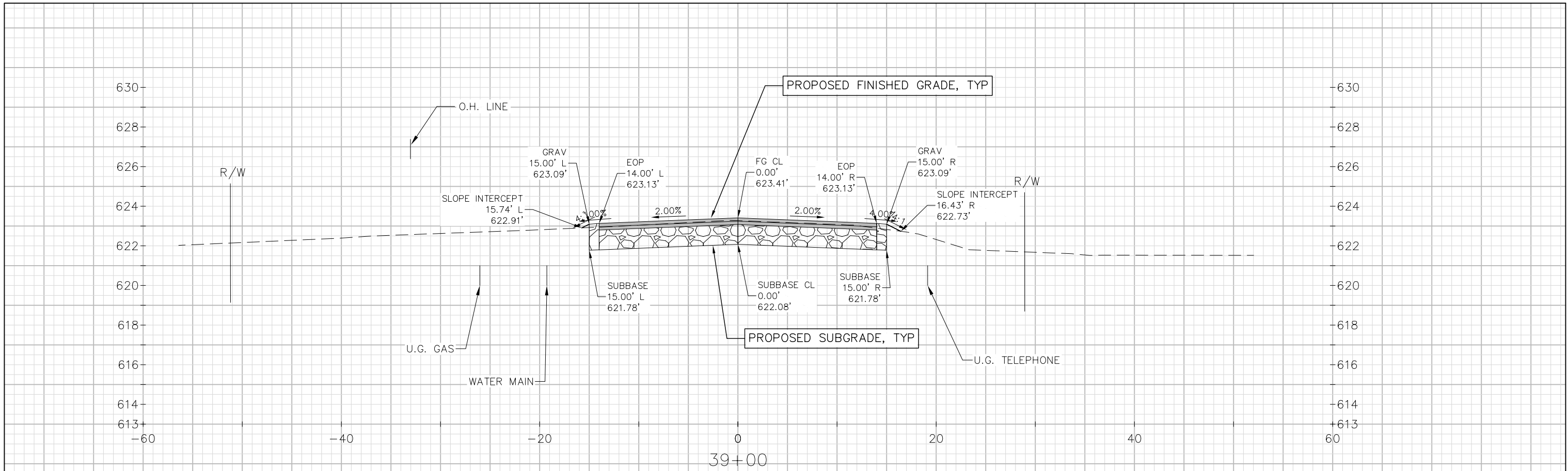


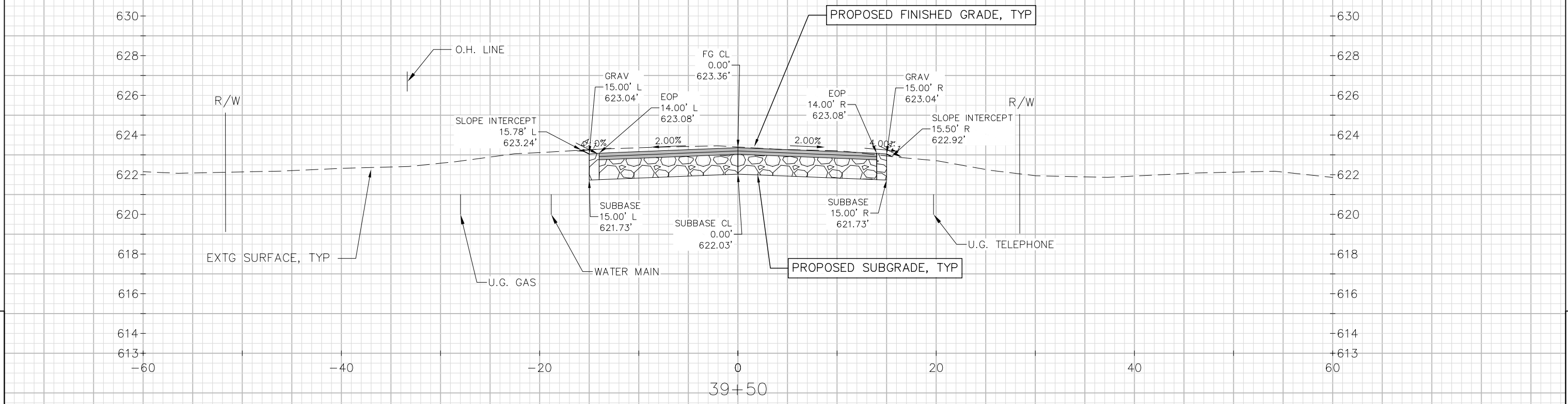
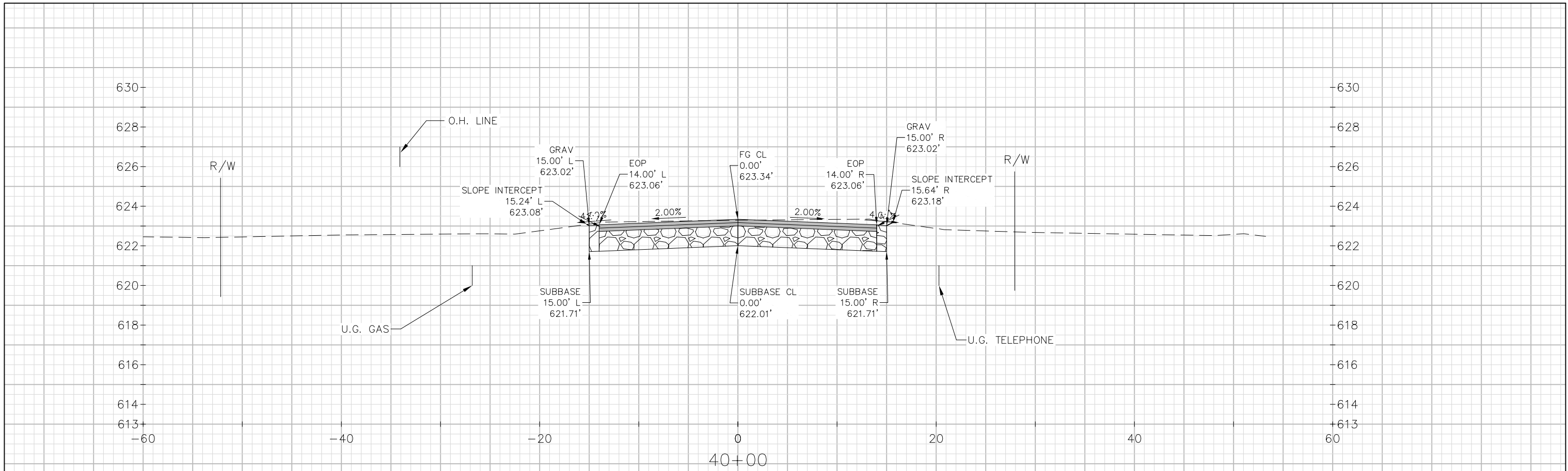


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Notes



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