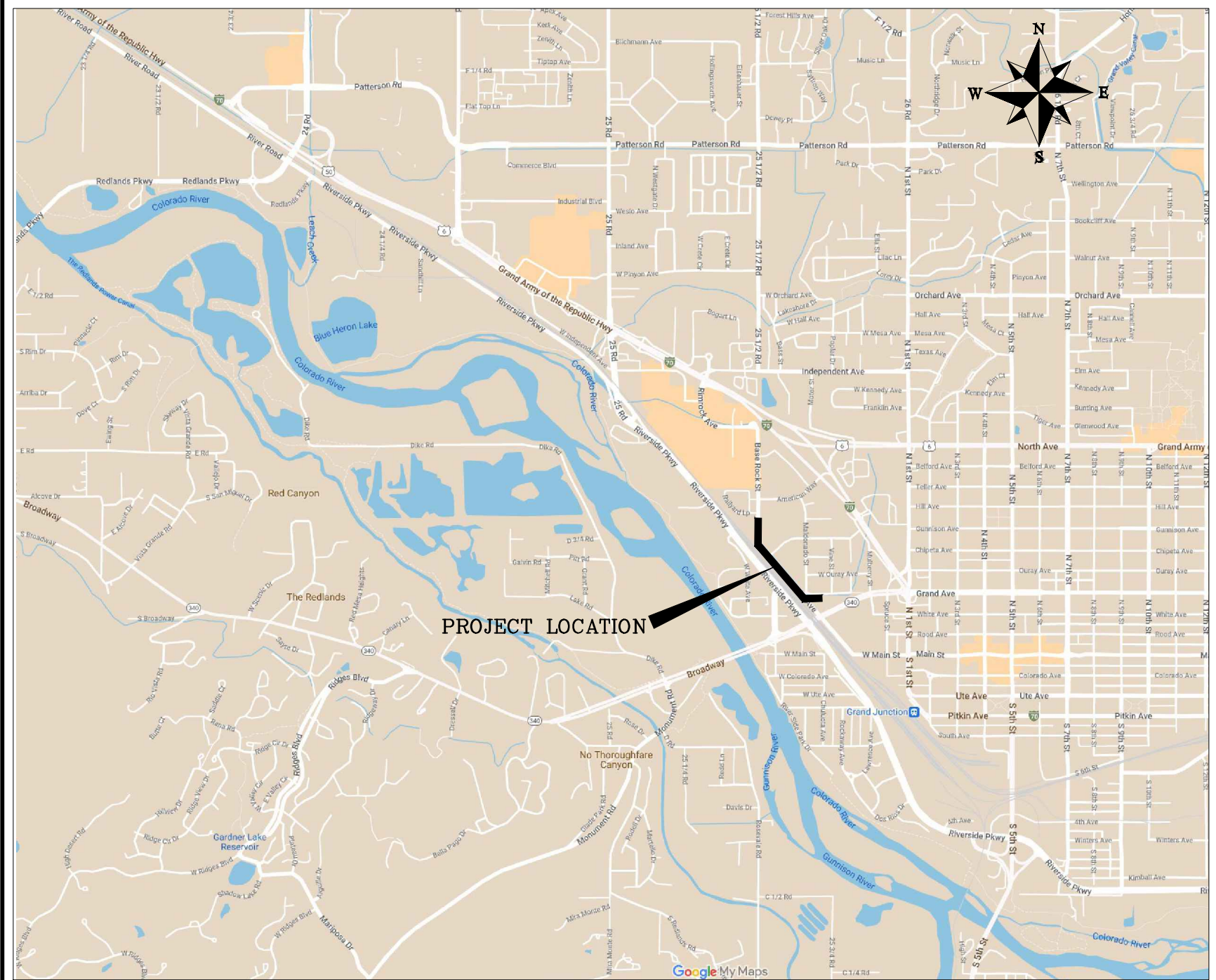


CITY OF GRAND JUNCTION CROSBY AVE UTILITY IMPROVEMENTS

December 11, 2024



PROJECT LOCATION

VICINITY MAP



*Public Works
Engineering Division*

Sheet Index

- 1 Cover Sheet
- 2 General Notes
- 3 Standard Abbreviations, Legend, & Symbols
- 4-8 Irrigation Plan and Profile
- 9 Sanitary Plan and Profile

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE S.U.E. NOTES SHEET WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE
REVISION Δ REV 1		DATE
REVISION Δ REV 2		DATE
REVISION Δ REV 3		DATE
REVISION Δ REV 4		DATE



**Know what's below.
Call before you dig.**

GENERAL NOTES:

- 1 PROJECT DESCRIPTION: THE PROJECT WILL CONSIST OF THE REPLACEMENT OF THE EXISTING AC WATERLINES, THE RELOCATION OF THE ELEVATED DITCH AND OTHER IRRIGATION FACILITIES INTO A PIPE, AND THE REHABILITATION OF THE EXISTING SANITARY SEWER PIPE IN BASE ROCK ST.
- 2 SUBSURFACE UTILITY ENGINEERING (SUE) SCOPE: OBTAIN GENERAL INFORMATION AS TO THE DESCRIPTION, NATURE, AND LOCATION OF SUBSURFACE UTILITIES IN THE AREA OF PROPOSED EXCAVATION AND DEPICT SUBSURFACE UTILITIES WITH RISK-BASED QUALITY LEVELS AS DEFINED IN ASCE 38-22 ON THE SUE PLANS TO INFORM THE CONTRACTOR OF THEIR EXISTENCE.
- 3 RISK-BASED QUALITY LEVEL DEFINITIONS FOR DEPICTED SUBSURFACE UTILITIES AS DEFINED BY ASCE 38-22:
 - 1 QUALITY LEVEL D (QL-D): A VALUE ASSIGNED TO A SUBSURFACE UTILITY SEGMENT OR UTILITY FEATURE NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH UTILITY RECORDS, INFORMATION FROM OTHERS, OR FROM VISUAL CLUES SUCH AS PAVEMENT CUTS, OBVIOUS TRENCHES, OR EXISTENCE OF SERVICE. QL-D UTILITIES ARE NOT REFERENCED TO THE PROJECT SURVEY DATUM.
 - 2 QUALITY LEVEL C (QL-C): A VALUE ASSIGNED TO A SUBSURFACE UTILITY SEGMENT OR UTILITY FEATURE NOT VISIBLE AT THE GROUND SURFACE WHOSE ESTIMATED POSITION IS JUDGED THROUGH CORRELATING UTILITY RECORDS OR SIMILAR EVIDENCE TO UTILITY FEATURES, VISIBLE ABOVEGROUND AND/OR UNDERGROUND. QL-C UTILITIES ARE NOT REFERENCED TO THE SURVEY PROJECT DATUM.
 - 3 QUALITY LEVEL B (QL-B): A VALUE ASSIGNED TO SUBSURFACE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE WHOSE EXISTENCE AND HORIZONTAL POSITION IS BASED ON GEOPHYSICAL METHODS COMBINED WITH PROFESSIONAL JUDGEMENT AND WHOSE LOCATION IS TIED TO THE PROJECT SURVEY DATUM. THE HORIZONTAL LOCATION OF SUBSURFACE UTILITY FACILITIES MUST BE RESOLVED WITH A TOLERANCE OF 0.2 FEET TO BE QL-B.
 - 4 QUALITY LEVEL A (QL-A): A VALUE ASSIGNED TO THAT PORTION (X-, Y-, AND Z-GEOMETRY) OF A SUBSURFACE UTILITY SEGMENT OR SUBSURFACE UTILITY FEATURE THAT IS DIRECTLY EXPOSED AND MEASURED AND WHOSE LOCATION AND DIMENSIONS ARE TIED TO THE PROJECT SURVEY DATUM. THE HORIZONTAL LOCATION OF UTILITY FACILITIES MUST BE RESOLVED WITH A TOLERANCE OF 0.2 FEET AND THE VERTICAL LOCATION OF UTILITY FACILITIES MUST BE RESOLVED WITH A TOLERANCE OF 0.1 FEET TO BE QL-A.
- 4 SUE PLAN LIMITATIONS:
 - 1 THE PURPOSE OF THE SUE PLANS IS TO AID IN THE IDENTIFICATION AND RESOLUTION OF UTILITY CONFLICTS. THE SUE PLANS ARE NOT INTENDED TO CONVEY ALL OF THE INFORMATION REQUIRED TO RELOCATE OR CONSTRUCT THE EXISTING OR PROPOSED UTILITIES. REFER TO THE RELEVANT CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION.
 - 2 PER ASCE 38-22 THE SUE PLANS ARE ITERATIVE DOCUMENTS, CHANGING OVER TIME AS NEW DATA IS COLLECTED AND PROJECT DELIVERY PROGRESSES. RISK-BASED UTILITY QUALITY LEVELS MAY BE DEVELOPED AND DELIVERED IN ANY ORDER, OR CONTEMPORANEOUSLY, AS THE PROJECT PROGRESSES THROUGH PROJECT DELIVERY.
 - 3 ALL DEPICTED SUBSURFACE UTILITIES ARE QL-D UNLESS NOTED. SUBSURFACE UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. MORE THAN ONE OF THE SAME TYPE OF UTILITY FACILITY MAY BE PRESENT AT LOCATIONS INDICATED.
 - 4 SUBSURFACE UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE SUE PLANS. SEE UTILITY LOCATING EQUIPMENT LIMITATIONS.
 - 5 UTILITY LOCATION AND NOTIFICATION OF THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) MEMBER UTILITIES AND NON-MEMBER UTILITIES PRIOR TO CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY.

NOTE: THE UNION PACIFIC RAILROAD IS NOT A UNCC MEMBER AND MUST BE CONTACTED SEPARATELY.
 - 6 RELIANCE UPON SUE PLANS DURING BIDDING DOES NOT RELIEVE THE CONTRACTOR FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND PROCEDURES DURING EXCAVATION.
 - 7 UTILITY INVESTIGATIONS PERFORMED BY THE CITY OF GRAND JUNCTION WERE COMPLETED ON 06/22/2023, 08/22/2023, AND 10/02/2023. UTILITY FACILITIES MAY HAVE BEEN CHANGED OR ADDED AFTER THESE DATES.
 - 8 THE SUBSURFACE UTILITY INVESTIGATION WAS LIMITED IN SOME AREAS DUE TO THICK VEGETATION AT THE DITCH, INOPERABLE MANHOLE LIDS AT MANHOLES D2-252-039 AND D3-252-012, AND PARKED VEHICLES.
- 5 UTILITY LOCATING EQUIPMENT LIMITATIONS:
 - 1 ELECTROMAGNETIC LINE LOCATING TECHNIQUES (CONDUCTION): THE SUCCESSFUL DETECTION OF UNDERGROUND UTILITIES IS DEPENDENT PRIMARILY UPON THE COMPOSITION AND CONSTRUCTION OF THE LINE OF INTEREST, AND DEPTH OF BURIAL. THE UTILITIES MUST BE EXPOSED AT THE SURFACE OR IN ACCESSIBLE UTILITY VAULTS CLOSE TO THE SURVEY AREA. UTILITIES THAT MAY NOT BE DETECTABLE USING THESE TECHNIQUES INCLUDE CERTAIN ABANDONED UTILITIES, UTILITIES NOT EXPOSED AT THE GROUND SURFACE, OR THOSE MADE OF NON-ELECTRICALLY CONDUCTIVE MATERIALS SUCH AS PVC, FIBERGLASS, VITRIFIED CLAY, AND METAL PIPES WITH INSULATING JOINTS. PIPES GENERALLY DEEPER THAN ABOUT FIVE FEET MAY NOT BE DETECTED.

THE DETECTION OF UNDERGROUND UTILITIES USING THE CONDUCTION MODE IS ALSO DEPENDENT UPON THE PROXIMITY OF THOSE UTILITIES TO BENDS, TEES, CHANGES IN DEPTH, OTHER SUBSURFACE UTILITIES, AND/OR ABOVE GROUND CULTURAL OBJECTS. NEARBY BURIED UTILITIES CAN MASK OR DISTORT SIGNALS ASSOCIATED WITH THE UTILITY IN QUESTION. SHALLOW UTILITIES WILL GENERALLY PRODUCE A STRONGER RESPONSE THAN ADJACENT DEEPER UTILITIES AND WILL GENERALLY MASK EFFECTS FROM THE DEEPER UTILITIES. SUBSURFACE UTILITIES LOCATED BENEATH OR IN CLOSE PROXIMITY TO SURFACE METAL OBJECTS SUCH AS REBAR IN CONCRETE, RAILROAD TRACKS, AND SURFACE PIPELINES ARE DIFFICULT TO ACCURATELY DETECT OR DELINEATE.

- 2 ELECTROMAGNETIC LINE LOCATING TECHNIQUES (PASSIVE): THE ABILITY TO DETECT PASSIVE SIGNALS ASSOCIATED WITH 60 HZ ELECTRIC LINES IS DEPENDENT UPON CURRENT FLOWING THROUGH THE LINE. ENERGIZED ELECTRIC LINES MAY NOT BE DETECTED IF THE LOAD IS SWITCHED OFF AND ARE STILL DANGEROUS IF CONTACTED DURING EXCAVATION.
- 3 METAL DETECTION TECHNIQUES (INDUCTION): THE DETECTION OF BURIED METAL UTILITIES, USING THE HANDHELD INDUCTION TECHNIQUE, IS DEPENDENT UPON THE SIZE OF THE UTILITY, ITS DEPTH OF BURIAL, AND ITS PROXIMITY TO ABOVE GROUND METAL OBJECTS. AS THE SIZE OR DIAMETER OF THE BURIED METAL UTILITY DECREASES, THE DEPTH AT WHICH IT CAN BE DETECTED ALSO DECREASES. A RELATIVELY LARGE UTILITY SUCH AS A CORRUGATED STEEL DRAIN LINE CAN BE DETECTED AT DEPTHS OF 3 TO 4 FEET. A SMALLER UTILITY, SUCH AS AN ELECTRIC LINE ASSOCIATED WITH STREET LIGHTS, MAY BE DETECTED ONLY AT DEPTHS OF 1 TO 2 FEET. THE ABILITY TO DETECT A BURIED METAL UTILITY IS ALSO BASED ON ITS PROXIMITY TO ABOVE GROUND METAL OBJECTS OR STRUCTURES. CULTURAL FEATURES SUCH AS CHAIN LINK FENCES, BUILDINGS, DEBRIS, RAILROAD TRACKS, GUARD RAILS, AND OTHER UTILITIES MAY PRODUCE A RESPONSE THAT CAN MASK EFFECTS FROM THE NEARBY BURIED METAL UTILITY.
- 4 GROUND PENETRATING RADAR (GPR): UTILITIES DETECTABLE WITH GPR TECHNIQUES INCLUDE BOTH METALLIC AND NONMETALLIC PIPES. THE ABILITY TO DETECT PIPES IS DEPENDENT ON SITE SPECIFIC CONDITIONS SUCH AS DEPTH OF BURIAL, DIAMETER OF THE PIPE, CONDITION OF THE PIPE, TYPE OF BACKFILL MATERIAL, AND SURFACE CONDITIONS OVER THE PIPE.
- 6 EQUIPMENT AND SOFTWARE USED TO COLLECT AND DEPICT SUBSURFACE UTILITY INFORMATION: PIPE AND CABLE LOCATOR, TRUCK-MOUNTED VAC UNIT, TOTAL STATION, AND AUTODESK CIVIL 3D 2022.
- 7 SURFACE CONDITIONS: GROUND COVER CONSISTS OF BARE EARTH, VEGETATION, AN ACTIVE DITCH, CONCRETE PAVING, AND ASPHALT PAVING. SNOW AND OTHER SURFACE WATER WERE NOT PRESENT. THE UTILITY INVESTIGATIONS WERE PERFORMED DURING FAIR WEATHER.
- 8 SOIL GEOPHYSICAL QUALITIES: THE NATIVE SOILS ARE TYPICALLY SILTY TO SANDY CLAY, AND SILTY TO CLAYEY SAND. THE FILL SOILS CONSIST OF SILTY TO GRAVELLY SAND WITH CLAY. BEDROCK WAS NOT ENCOUNTERED DURING THE PROJECT SOIL INVESTIGATION. GROUNDWATER WAS ENCOUNTERED AT DEPTHS RANGING FROM 3 FEET TO 8.4 FEET BELOW EXISTING GRADES AT THE TIME OF DRILLING OPERATIONS (MAY 30, 2023). THE CONCENTRATION OF WATER-SOLUBLE SULFATE CONTENT IN TEST SAMPLES RANGED FROM 0.08 TO 0.27 PERCENT BY WEIGHT.
- 9 SUE INVESTIGATION COMMENTARY:
 - 1 QL-B COULD NOT ACHIEVED ON ALL UTILITIES FOR THE FOLLOWING REASONS:
 - 1 MANY OF THE GAS, ELECTRIC, AND TELECOM UTILITIES ARE BURIED AT DEPTHS GREATER THAN SIX FEET DUE TO THE SITE'S CLOSE PROXIMITY TO THE UNION PACIFIC RAILROAD. SEE UTILITY EQUIPMENT LOCATING LIMITATIONS.
 - 2 TEST HOLES WERE COMPLETED AT VARIOUS WATER, GAS, TELECOM, AND ELECTRIC FACILITY LOCATIONS TO VERIFY DEPTH AND BEARING.
 - 3 THE NRCS RATES THE SITE'S SOILS AS UNSUITABLE FOR GPR. SIGNAL ATTENUATION DUE TO HIGH LEVELS OF SALTS, SULFATES, AND CARBONATES IS RATED SEVERE. SIGNAL ATTENUATION DUE TO WATER AND EXCHANGEABLE IONS IS RATED MODERATE.
 - 2 QL-A POINTS WERE ATTEMPTED AT ALL LOCATIONS OF POTENTIAL CONFLICT WITH THE PROPOSED GRAVITY-FED SYSTEMS. THE TEST HOLES HAD TO BE ABNORMALLY WIDE DUE TO A LARGE QUANTITY OF LARGE COBBLES IN THE SOIL. IN MANY CASES THE TEST HOLE WAS TOO WIDE TO PLACE A LEVEL ROD AND RECORD A MEASUREMENT. RELATIVE DEPTH AND LOCATION (X-, Y-) MEASUREMENTS WERE OBTAINED IN THESE CASES.
 - 3 CONFLICTS WITH FINISHED GRADE HAVE BEEN EVALUATED AND ARE NOT ANTICIPATED. CONFLICTS WITH THE PROPOSED STORM DRAINS AND IRRIGATION LATERAL HAVE BEEN EVALUATED AND WILL BE ADDRESSED IN THE DESIGN PROCESS.
- 10 SEE THE STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS FOR UTILITY LINE TYPE DEPICTIONS, UTILITY APPURTENANCES SYMBOLS, AND ABBREVIATIONS USED FOR THE SUE PLANS.

UTILITIES AND AGENCIES

AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022
CITY OF GRAND JUNCTION	TOM LANAM	TRAFFIC SUPERVISOR	TRAFFIC	333 WEST AVE BLDG D	333 WEST AVE BLDG D	GRAND JCT., CO 81501	(970) 244-1573	(970) 256-4022
GRAND VALLEY IRRIGATION COMPANY	PHIL BERTRAND	IRRIGATION SUPERINTENDENT	IRRIGATION	988 26 RD	988 26 RD	GRAND JCT., CO 81506	(970) 242-2762	
SPECTRUM	MARK KOSTELECKY	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	BRENDA BOES	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2664	(970) 244-2664
XCEL	SARAH DARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656
GRAND VALLEY POWER	MIKE GARDNER	SUPERVISOR	ELECTRIC	845 22 RD	845 22 RD	GRAND JCT., CO 81505	(970) 242-0040	
UNITE PRIVATE NETWORKS			COMMUNICATION	123 N 7TH ST., #100	123 N 7TH ST., #100	GRAND JCT., CO 81501	(866) 813-3608	

REVISION	DESCRIPTION	DATE	DRAWN BY	DJM	DATE	11/2024
REVISION			DESIGNED BY	DJM	DATE	11/2024
REVISION			CHECKED BY	WC	DATE	11/2024
REVISION			APPROVED BY	WC	DATE	11/2024

SCALES:
NO SCALE



ENGINEERING AND
TRANSPORTATION DEPARTMENT
PROJECT NO. F210205

CROSBY AVE UTILITY IMPROVEMENTS
002 UTILITY GENERAL NOTES
December 11, 2024

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ABBREVIATIONS

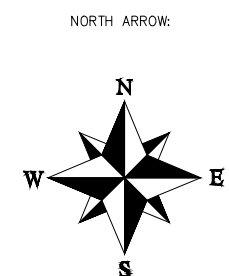
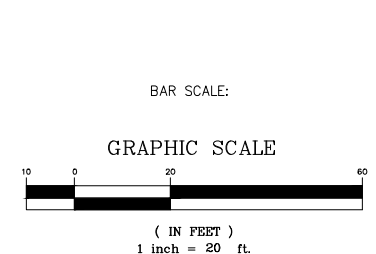
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORROGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C.G.& SW	CURB, GUTTER & SIDEWALK
CL	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
F	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

LEGEND

BSWMP	PROPOSED CONCRETE	=====
DRAINAGE BASIN BOUNDARY	CURB AND GUTTER	=====
BSWMP	PROPOSED CONCRETE	=====
ANCHORED STRAW BALES	CURB, GUTTER, & SIDEWALK	=====
BSWMP	PROPOSED CONCRETE	=====
SILT FENCE	SIDEWALK	=====
BSWMP	PROPOSED "WET" UTILITIES	=====
SILT FENCE	(CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN)	8" PVC SANITARY SEWER
BUILDING	ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE	
CONCRETE CURB AND GUTTER	RAIL ROAD	=====
CONCRETE CURB, GUTTER, & SIDEWALK	RETAINING WALL	=====
CONCRETE DITCH	STRIPING (CONTINUOUS WHITE)	WHITE
CONCRETE SIDEWALK	STRIPING (DASHED WHITE)	WHITE
CULVERT	STRIPING (CONTINUOUS YELLOW)	YELLOW
EARTH DITCH	STRIPING (DASHED YELLOW)	YELLOW
EDGE OF GRAVEL	TOP OF SLOPE	=====
EDGE OF PAVEMENT	CONTOUR LINES (SHOWN BETWEEN TOP & TOE)	=====
FENCE (HT & MATL NOTED)	TOE OF SLOPE	=====
GUARD RAIL	TRAFFIC DETECTOR LOOP	=====
HATCHING: INDICATES FULL DEPTH ASPHALT REMOVAL	UTILITY LINE (ABANDON) (THIS CASE A WATER LINE)	W (ABANDONED) 8" W
HATCHING: INDICATES EXISTING SURFACE MATERIAL REMOVAL	UTILITY LINE (CABLE TV)	TV TV
HATCHING: INDICATES CONCRETE REMOVAL	UTILITY LINE (ELECTRIC)	E E
HATCHING: INDICATES STAGING AREA	UTILITY LINE (FIBER OPTIC)	FO OPT-FO
LINE (CENTER OF IMPROVEMENTS)	UTILITY LINE (GAS)	G 1.1/4" MW G
LINE (CITY LIMITS)	UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER)	HVHP
LINE (CONTROL)	UTILITY LINE (OVERHEAD POWER)	OHP
LINE (EASEMENT)	UTILITY LINE (OVERHEAD TELEPHONE)	OHT
LINE (MONUMENT/SECTION)	UTILITY LINE (SANITARY SEWER)	8" SAN
LINE (PROPERTY)	UTILITY LINE (SANITARY SEWER FORCE MAIN)	8" FM
LINE (RIGHT OF WAY)	UTILITY LINE (SANITARY SEWER SERVICE)	SS
MATCH LINE	UTILITY LINE (STORM SEWER)	8" STM
PIPE (IRRIGATION)	UTILITY LINE (STORM SEWER, PERFORATED)	8" PERF
PIPE (SIPHON)	UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION)	18" COMB
	UTILITY LINE (TELEPHONE)	T T
	UTILITY LINE (WATER)	W 8" W

SYMBOLS

BENCH MARK	⊕
CATCH BASIN	⊞
CLEAN OUT	⊞
CURB STOP	◀
FIRE HYDRANT	⊕
GUY WIRE ANCHOR	→
HEADGATE	⊞
IRRIGATION PUMP	⊞
MAILBOX	⊞
MANHOLE (ELECTRIC)	⊕
MANHOLE (GAS)	⊕
MANHOLE (SANITARY/STORM)	⊕
MANHOLE (TELEPHONE)	⊕
MANHOLE (TV)	⊕
MANHOLE (WATER)	⊕
METER (GAS)	⊕
METER (WATER)	⊕
PEDESTAL (TELEPHONE)	⊕
PEDESTAL (TV)	⊕
PROPERTY PIN	⊕
PULL BOX	⊕
REDUCER FITTING	⊕
SIGN OR POST (SIGN TYPE NOTED)	⊕
SPRINKLER HEAD	⊕
STREET LIGHT	⊕
SURVEY MONUMENT (CITY)	⊕
SURVEY MONUMENT (TYPE NOTED)	⊕
TEST HOLE	⊕
TRAFFIC PAINT MARKING	⊕
TRAFFIC SIGNAL POLE AND MAST ARM	⊕
UTILITY POLE	⊕
VALVE (GAS)	⊕
VALVE (IRRIGATION)	⊕
VALVE (WATER)	⊕
VEGETATION (HEDGE OR BUSH)	⊕
VEGETATION (TREE STUMP)	⊕
VEGETATION (TREE) (CALIPER SIZE NOTED)	⊕
WATER HYDRANT	⊕
WEIR	⊕
YARD LIGHT	⊕



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
1			DJM	11/2024
2			DJM	11/2024
3			WC	11/2024
4			WC	11/2024

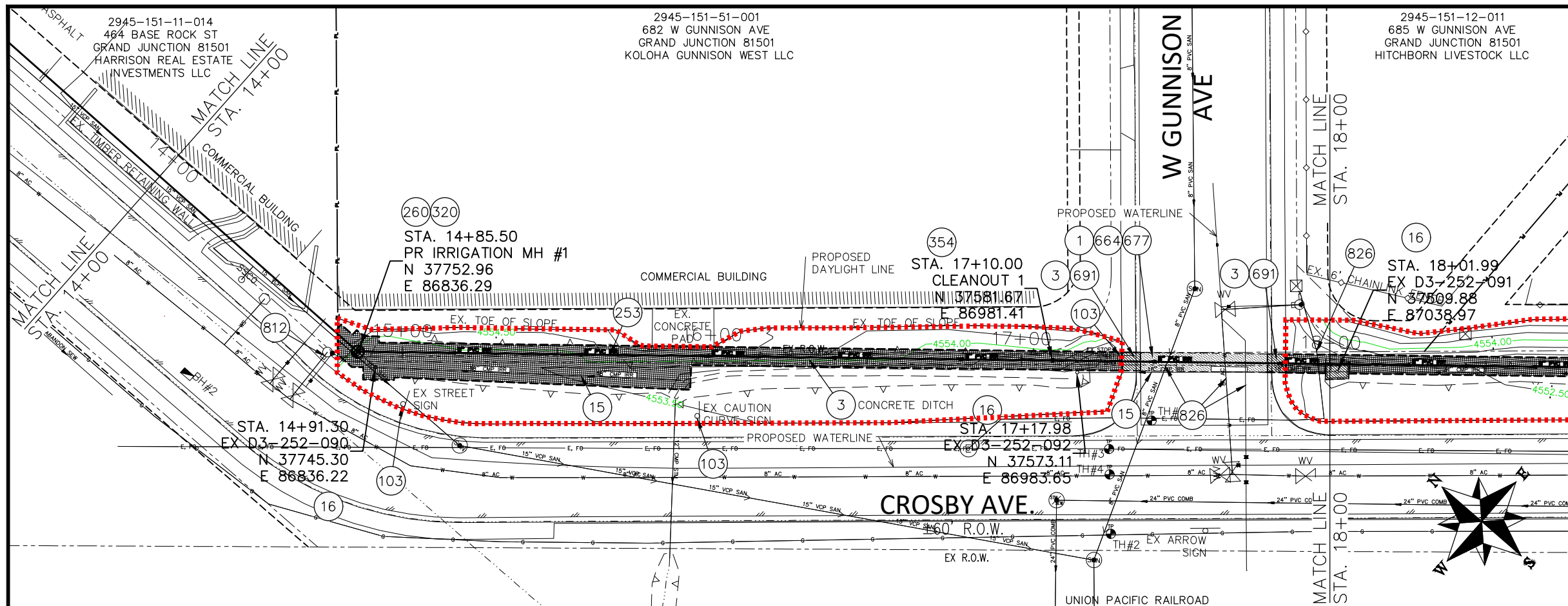
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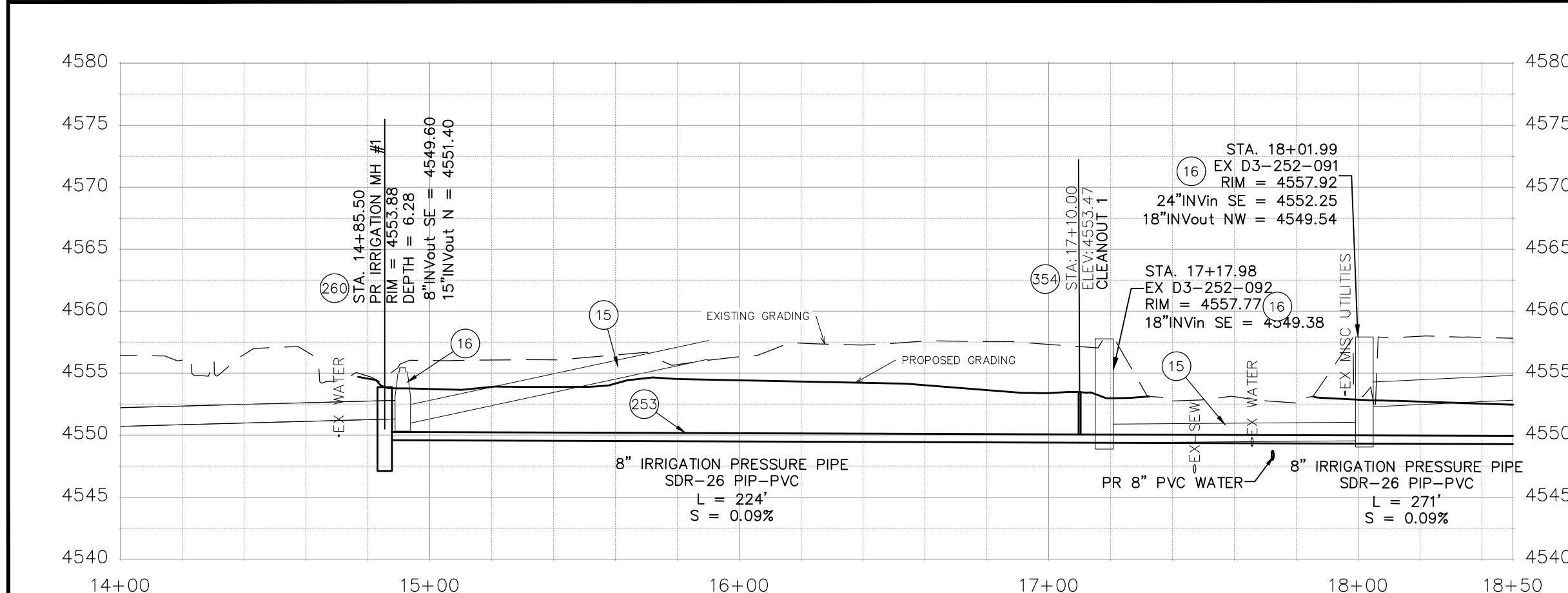
ENGINEERING AND
TRANSPORTATION DEPARTMENT
PROJECT NO. F210205

CROSBY AVE UTILITY IMPROVEMENTS
STANDARD ABBREVIATIONS
December 11, 2024

N:\Eng\Proj\F210205 (Crosby Ave Improvements)\60CAD\DESIGN\Irrigation and SSWR Plan Set\003 UTILITY STANDARD ABBREVIATIONS LEGENDS AND SYMBOLS.dwg - PLOTTED 12/11/2024 9:31:41 AM



- CONSTRUCTION NOTES
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
 - 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
 - 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
 - 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS.
 - 103 210 - RESET SIGN
 - 253 108.2 - 8" IRRIGATION PRESSURE PIPE (SDR 26 PIP-PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - 260 102.11/108.5 - IRRIGATION BASIC MANHOLE (48" I.D.) INCLUDES CONNECTION OF ADJACENT IRRIGATION LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-15).
 - 320 102.11 - CONNECT MANHOLE TO EXISTING IRRIGATION (18" PIPE). CONTRACTOR SHALL USE A CAST-IN-PLACE BASE TO FORM INVERT AROUND THE EXISTING PIPE. "O" RING GASKETS OR OTHER WATER STOPS ARE TO BE PLACED AROUND THE INLET AND OUTLET PIPES TO ENSURE A WATER TIGHT SEAL IS PROVIDED AT THE MH BASE. CARE SHOULD BE TAKEN SO THAT THE EXISTING LINE DOES NOT SAG OR FLOAT DURING CONSTRUCTION OF THE BASE.
 - 354 104.20 - INSTALL 2-WAY CLEANOUT (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
 - 664 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
 - 677 401.08 - HOT BITUMINOUS PAVEMENT (PATCHING) (4" THICK) (GRADING SX, BINDER GRADE PG 64-22) (TWO 2" LIFTS)
 - 691 ASPHALT HOT PATCH (SHAPE ASPHALT TO MATCH EXISTING MONOLITHIC SIDEWALK PROFILE)
 - 812 PROTECT FIRE HYDRANT
 - 826 PROTECT EXISTING UTILITY LINE IN PLACE



THE EXISTING ELEVATED DITCH SHALL BE REMOVED ENTIRELY, FROM TOE OF SLOPE TO TOE OF SLOPE.

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REVISION			DJM	11/2024
REVISION			WC	11/2024
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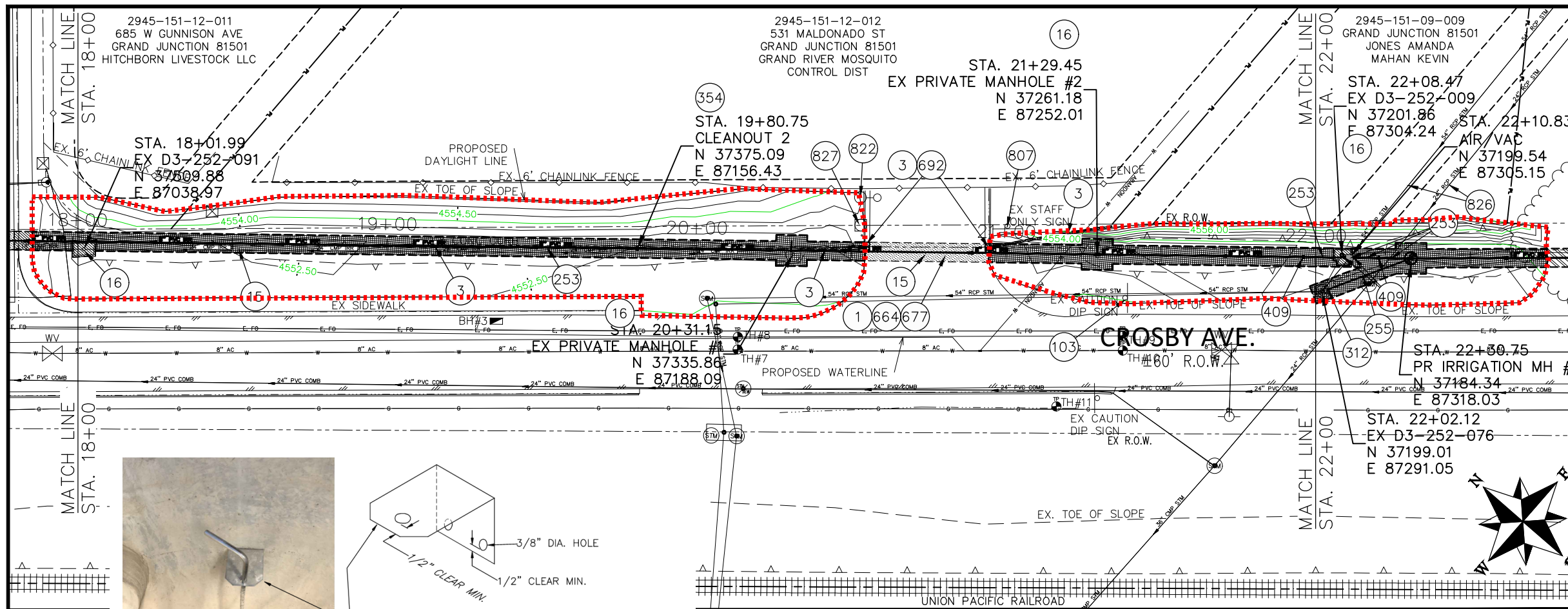
SCALES:
PLAN & PROFILE
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ENGINEERING AND
TRANSPORTATION DEPARTMENT
PROJECT NO. P210205

CROSBY AVE UTILITY IMPROVEMENTS
IRRIGATION PLAN - 2
December 11, 2024

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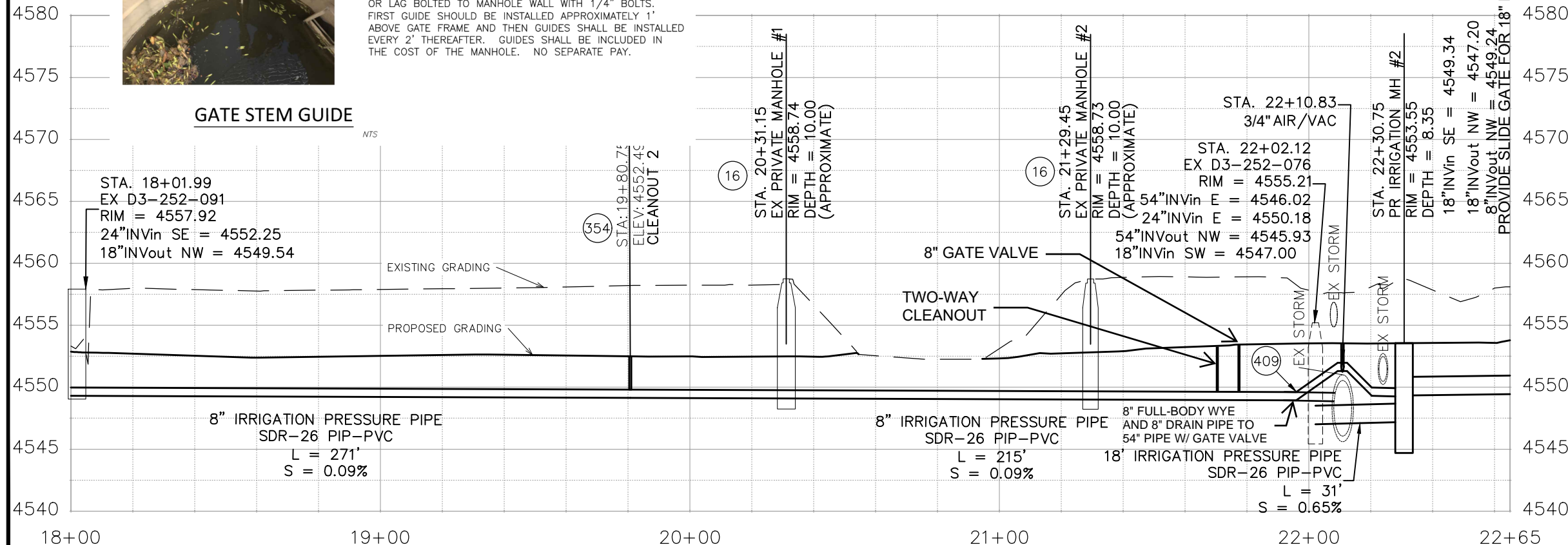


- CONSTRUCTION NOTES**
- 1 202 - REMOVAL OF ASPHALT MAT. CUT AND REMOVE ASPHALT AS SHOWN. (INDICATED BY DOT HATCH PATTERN)
 - 3 202 - REMOVAL OF CONCRETE. SAW CUT AND REMOVE CONCRETE AS SHOWN. (INDICATED BY CROSS HATCH PATTERN) INCLUDES BUT NOT LIMITED TO CURB, GUTTER, SIDEWALK, DRIVEWAY, SLABS, V-PAN, CURB RAMPS, INTERSECTION CORNERS, APRONS, AND LANDSCAPE BORDERS.
 - 15 202 - REMOVAL OF PIPE AS SHOWN. (SIZE AND TYPE AS SHOWN ON PLAN)
 - 16 202 - REMOVAL OF MANHOLE. CONTRACTOR SHALL SALVAGE RING AND COVER AND DELIVER TO CITY SHOPS
 - 103 210 - RESET SIGN
 - 253 108.2 - 8" IRRIGATION PRESSURE PIPE (SDR 26 PIP-PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - 255 108.2 - 18" IRRIGATION PRESSURE PIPE (SDR 26 PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - 354 104.20 - INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
 - 409 102.8/108.3 - 8" DIA. 45 DEG ELBOW
 - 664 304 - AGGREGATE BASE COURSE (CLASS 6) (12" THICK)
 - 677 401.08 - HOT BITUMINOUS PAVEMENT (4" THICK) (PATCHING) (GRADING SX, BINDER GRADE PG 64-22) (TWO 2" LIFTS)
 - 692 ASPHALT HOT PATCH (SHAPE ASPHALT TO MATCH EXISTING CURB AND GUTTER PROFILE)
 - 807 PROTECT SIGN
 - 822 PROTECT LIGHT POLE
 - 826 PROTECT EXISTING UTILITY LINE IN PLACE
 - 827 PROTECT FENCE CONTROL BOX AND BOLLARD



FIELD OR SHOP FABRICATE 1/16 THICK ALUMINUM GATE STEM GUIDE TO OPERATE WITH INDIVIDUAL GATES APPROXIMATELY AS SHOWN. GUIDE CAN BE "RED HEADED" OR LAG BOLTED TO MANHOLE WALL WITH 1/4" BOLTS. FIRST GUIDE SHOULD BE INSTALLED APPROXIMATELY 1' ABOVE GATE FRAME AND THEN GUIDES SHALL BE INSTALLED EVERY 2' THEREAFTER. GUIDES SHALL BE INCLUDED IN THE COST OF THE MANHOLE. NO SEPARATE PAY.

GATE STEM GUIDE

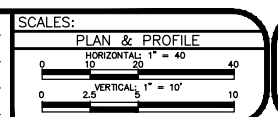


INSTALL SLIDE GATE FOR 18" PIPE IN MH #2 (FRESNO SERIES 5500 GALVANIZED TOGGLE GATE OR ENGINEER APPROVED EQUAL). CONTRACTOR PROVIDE GATE STEM GUIDE PER DETAIL.

AIR/VACUUM VALVE SHALL BE ARI S-050 OR ENGINEER APPROVED EQUAL.

THE EXISTING ELEVATED DITCH SHALL BE REMOVED ENTIRELY, FROM TOE OF SLOPE TO TOE OF SLOPE.

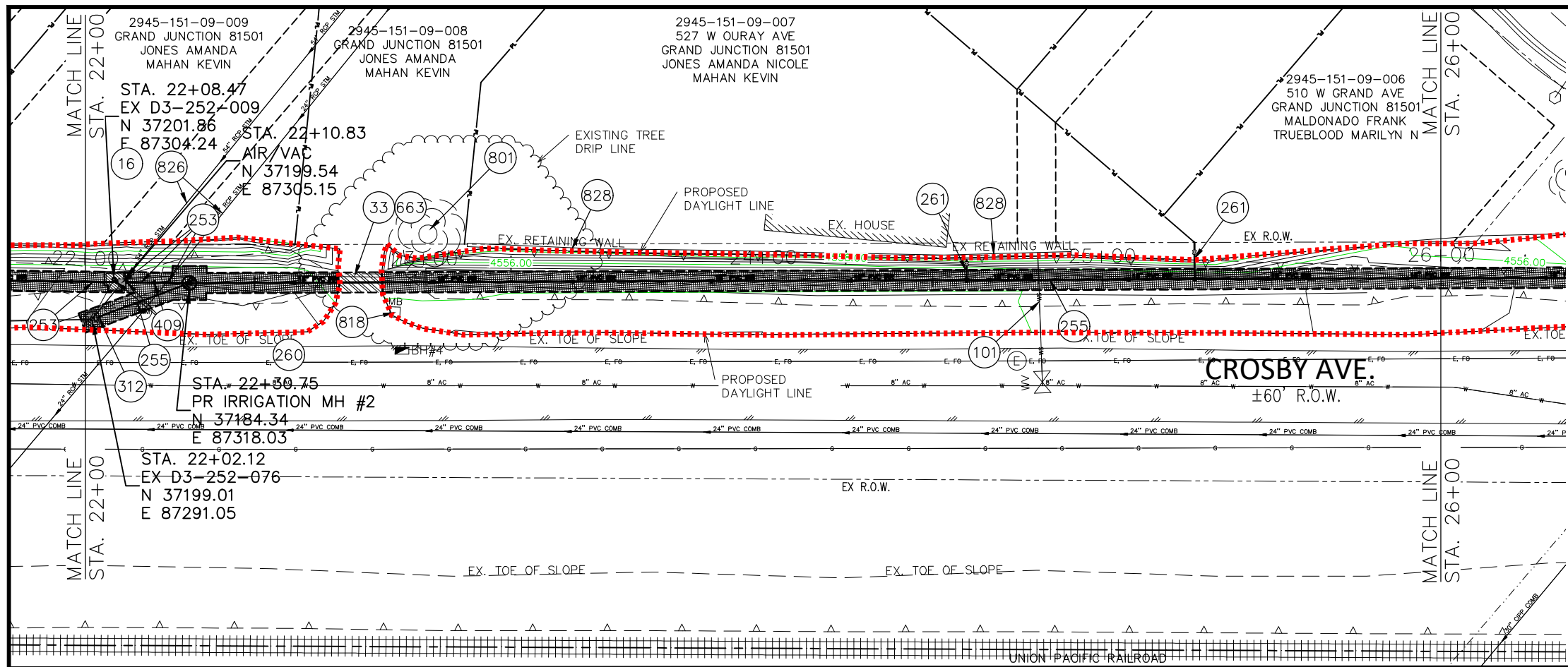
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REVISION C			WC	11/2024
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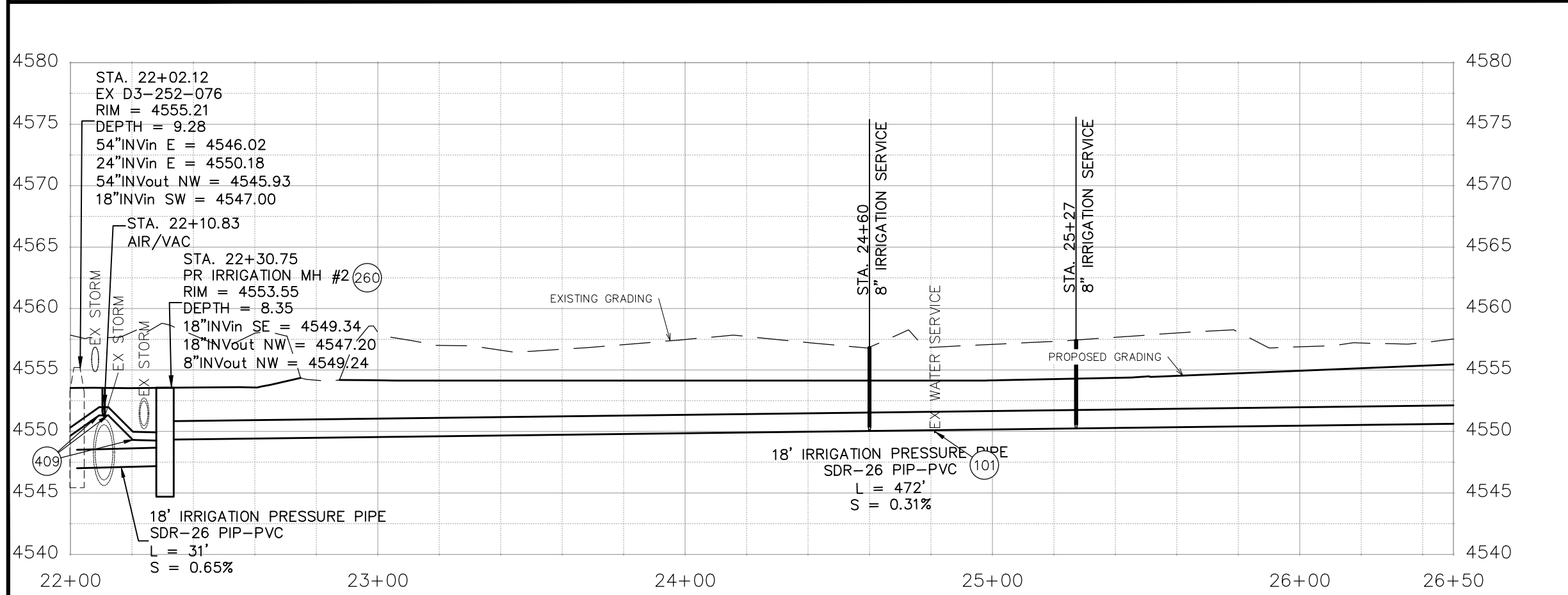
ENGINEERING AND TRANSPORTATION DEPARTMENT
 PROJECT NO. F210205

CROSBY AVE UTILITY IMPROVEMENTS
 IRRIGATION PLAN - 3
 December 11, 2024

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- CONSTRUCTION NOTES**
- (16) 202 - REMOVAL OF DEVERTER BOX
 - (33) 202 - REMOVAL OF EXISTING SURFACE MATERIAL.
 - (101) 108.2 - RESET WATER SERVICE
 - (253) 108.2 - 8" IRRIGATION PRESSURE PIPE (SDR 26 PIP-PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - (255) 108.2 - 18" IRRIGATION PRESSURE PIPE (SDR 26 PIP-PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
 - (260) 102.11/108.5 - IRRIGATION BASIC MANHOLE (48" I.D.) INCLUDES CONNECTION OF ADJACENT IRRIGATION LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-15).
 - (261) 102.11/108.5 - 8" IRRIGATION STUB. INCLUDE TEE, GATE VALVE AND 2-WAY CLEANOUT. INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
 - (312) 102.11/108.5 - CONNECT TO EXISTING MANHOLE (18" PIPE). (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-08).
 - (409) 102.8/108.3 - 8" DIA. 45 DEG ELBOW
 - (663) 304 - AGGREGATE BASE COURSE (CLASS 6) (6" THICK)
 - (801) REMOVE TREE
 - (818) PROTECT MAILBOX
 - (826) PROTECT EXISTING UTILITY LINE IN PLACE
 - (828) PROTECT EXISTING RETAINING WALL



THE EXISTING ELEVATED DITCH SHALL BE REMOVED ENTIRELY, FROM TOE OF SLOPE TO TOE OF SLOPE.

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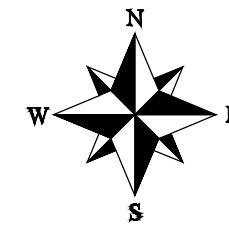
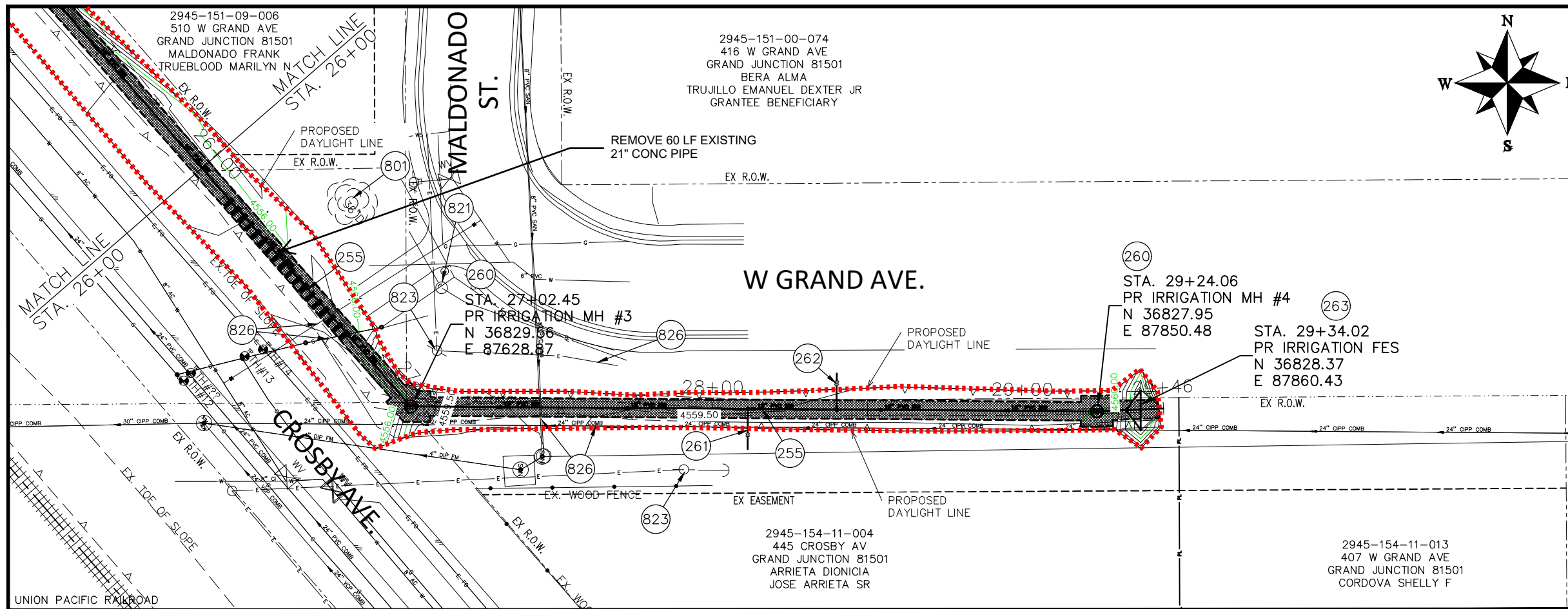
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ENGINEERING AND TRANSPORTATION DEPARTMENT
PROJECT NO. F210205

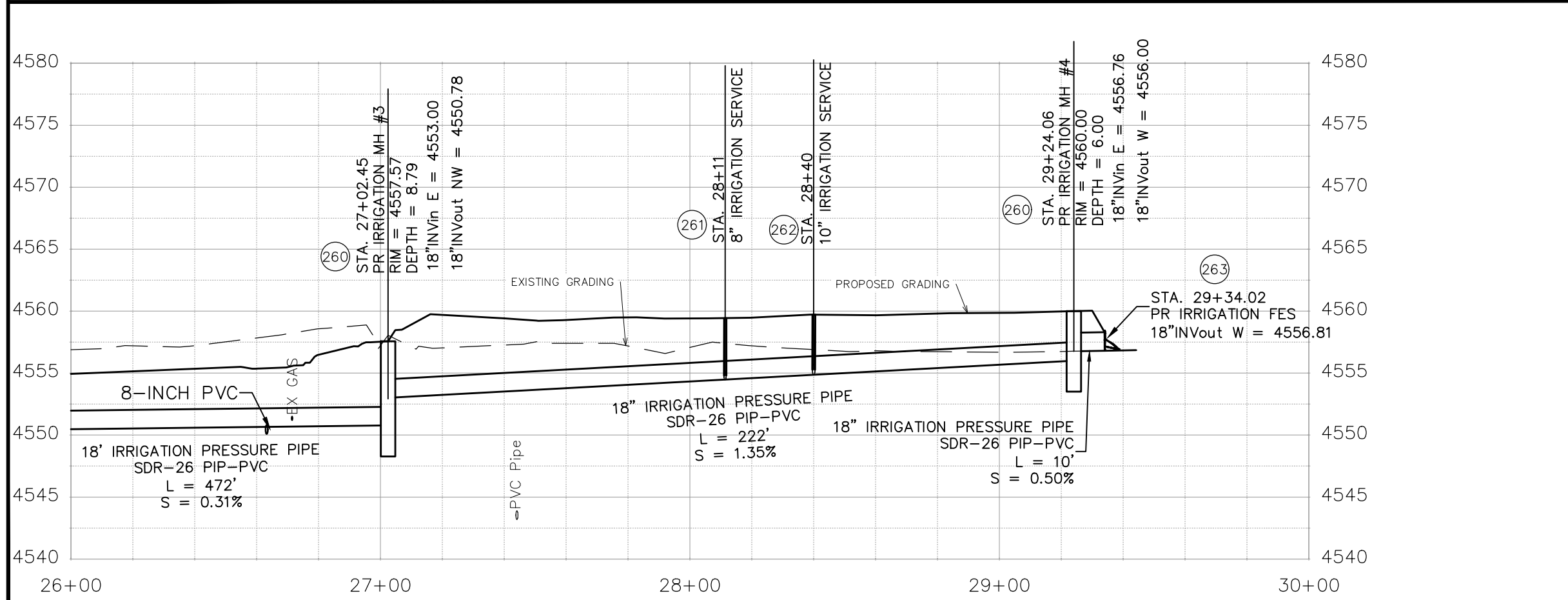
CROSBY AVE UTILITY IMPROVEMENTS
IRRIGATION PLAN - 4
December 11, 2024

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CONSTRUCTION NOTES

- 255 108.2 - 18" IRRIGATION PRESSURE PIPE (SDR 26 PIP-PVC). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- 260 102.11/108.5 - IRRIGATION BASIC MANHOLE (48" I.D.) INCLUDES CONNECTION OF ADJACENT IRRIGATION LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-15).
- 261 102.11/108.5 - 8" IRRIGATION STUB. INCLUDE TEE, GATE VALVE AND 2-WAY CLEANOUT. INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
- 262 102.11/108.5 - 10" IRRIGATION STUB. INCLUDE TEE, GATE VALVE AND 2-WAY CLEANOUT. INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07). CONTRACTOR SHALL LOCATE AND CONNECT TO EXISTING 10" PIPE.
- 263 102.11/108.5 - 18" FLARED END SECTION. INCLUDES TRASH RACK (PER PROJECT SPECIAL PROVISION SP-2).
- 801 REMOVE TREE
- 821 PROTECT LIGHT POLE
- 823 PROTECT UTILITY POLE
- 826 PROTECT EXISTING UTILITY LINE IN PLACE



SPECIAL PROVISION SP-2. TRASH RACK (GRATE) AND FLARED END SECTION (FES) REQUIREMENTS:

1. FES SHALL BE PRECAST CONCRETE.
2. GRATE SHALL BE GALVANIZED STEEL.
3. GRATE SAFETY REQUIREMENTS:
 - a. GRATE SHALL BE INCLINED WITH A SLOPE OF 1:1 OR MILDER.
 - b. GRATE BAR SPACING IS 5".
 - c. GRATE SHALL HAVE A MIN. AREA OF 72 SQ. IN.
4. SUBMITTALS: PROVIDE SHOP DRAWINGS OR CUT SHEETS FOR FES AND GRATE.

THE EXISTING ELEVATED DITCH SHALL BE REMOVED ENTIRELY, FROM TOE OF SLOPE TO TOE OF SLOPE.

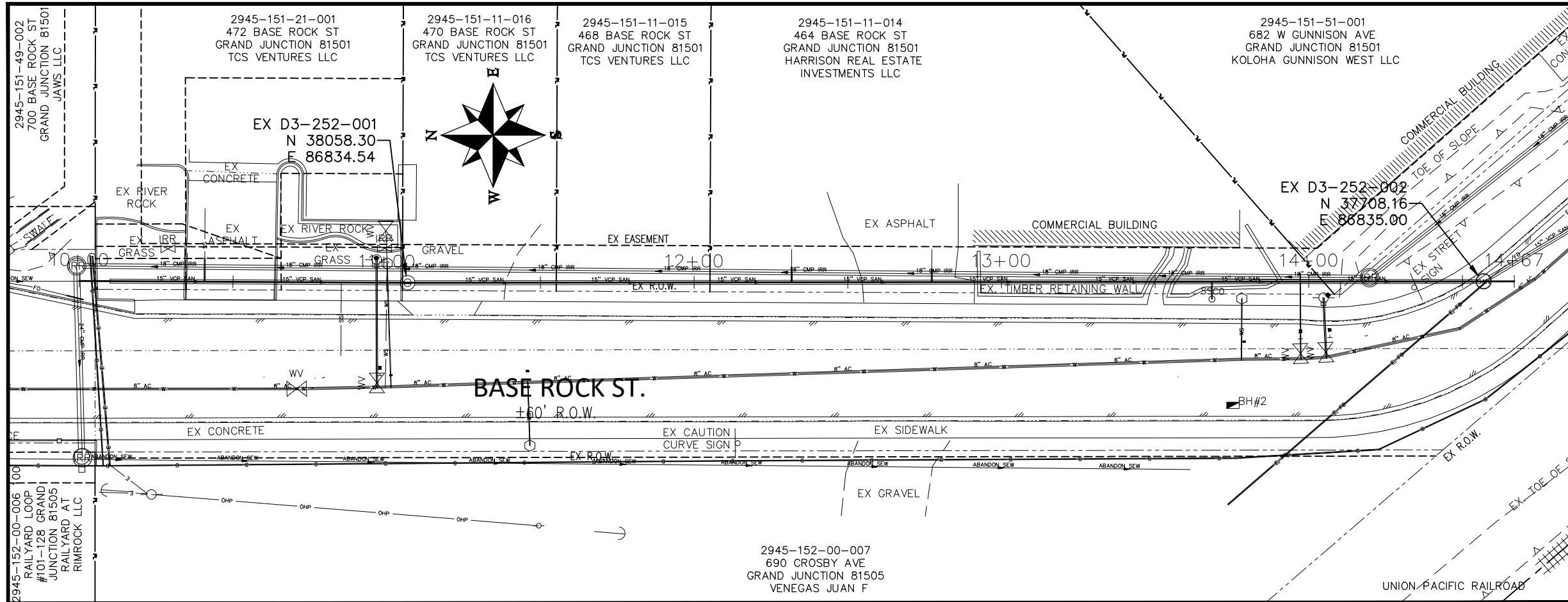
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REVISION			DJM	11/2024	
REVISION			WC	11/2024	
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ENGINEERING AND
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CROSBY AVE UTILITY IMPROVEMENTS
IRRIGATION PLAN - 5
December 11, 2024

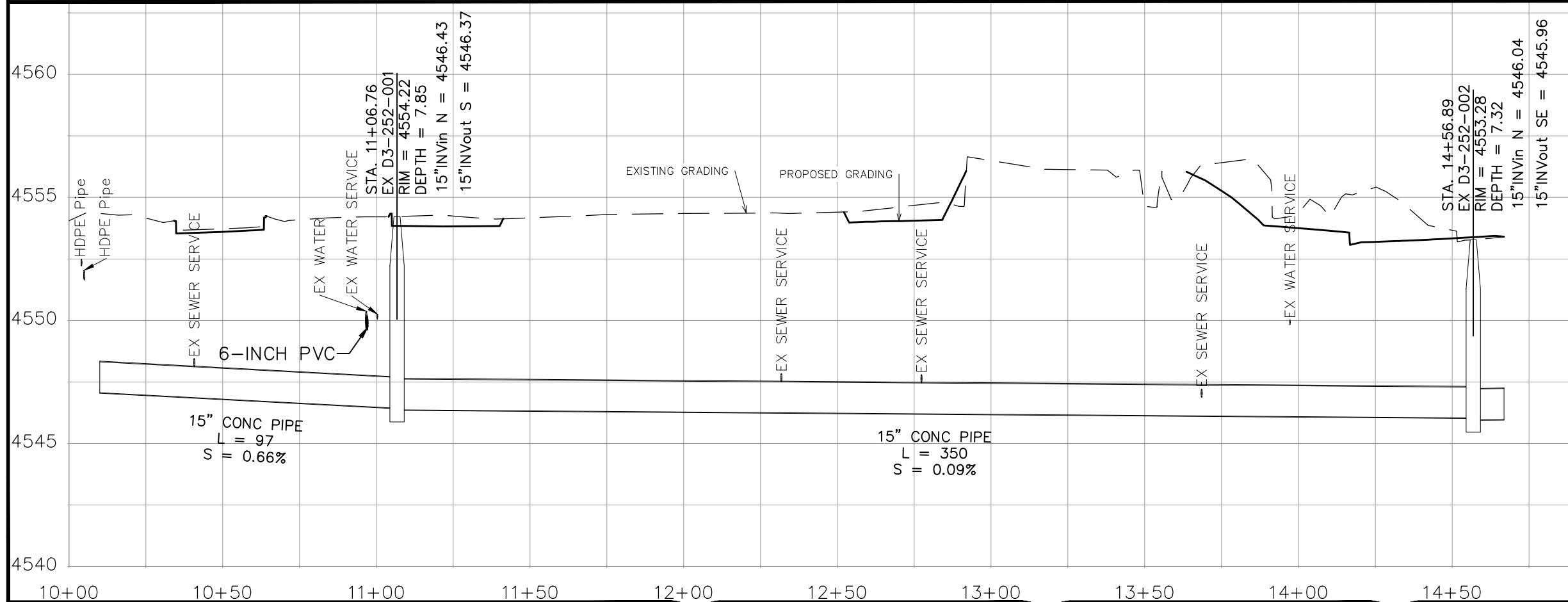
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CONSTRUCTION NOTES

(365) SLIPLINE EXISTING 15" CONCRETE PIPE WITH 8" PVC PIPE. (PER PROJECT SPECIAL PROVISION SP-1).

(366) PROVIDE SADDLE TAP AT EXISTING SEWER SERVICE CONNECTIONS.



SPECIAL PROVISION SP-1, SLIPLINING REQUIREMENTS:

- SUBMITTALS:
 - SPILL PREVENTION AND CONTAINMENT PLAN.
 - BYPASS PLAN.
 - CELLULAR GROUT MIX DESIGN FOR ANNULAR SPACE.
 - METHOD STATEMENT, INCLUDING PROVISIONS TO PREVENT THE NEW 8" PIPE FROM FLOATING, OVER-PRESSURIZATION, AND BUCKLING WHEN THE GROUT IS PLACED. INDICATE ACCESS PIT LOCATIONS ON A SITE MAP.
 - MANUFACTURER'S LITERATURE FOR SADDLE TAPS, GASKETS, AND FITTINGS.
- PRIOR TO INSTALLATION OF SLIPLINING THE CONTRACTOR SHALL PREPARE THE EXISTING PIPE AND CLEAR DEBRIS.
- CONTRACTOR SHALL RESTORE ALL SERVICE CONNECTIONS.
- CONTRACTOR SHALL CUT THE UPPER HALF OF SLIPLINED PIPE OUT AT MANHOLES AND CONSTRUCT MANHOLE BENCHES TO MATCH NEW INVERT ELEVATIONS.
- ANY ITEM NOT SPECIFIED WILL BE CONSIDERED INCIDENTAL TO THE WORK.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION A			DJM	11/2024
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REVISION C			WC	11/2024
REVISION D			WC	11/2024

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ENGINEERING AND TRANSPORTATION DEPARTMENT
PROJECT NO. F210205

CROSBY AVE UTILITY IMPROVEMENTS
SANITARY SEWER PLAN - 1
December 11, 2024

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