# MERIDIAN STORAGE, LLC

# MERIDIAN STORAGE

## FALCON RANCHETTES FILING NO. 1A, NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 1 TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE

## CONSTRUCTION DRAWINGS

## VR239 & PPR2336

### PROJECT CONTACTS

#### PROPERTY OWNER
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### CITY & UTILITY CONTACTS

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#### WASTEWATER
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#### ELECTRIC
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FALCON, CO 80831
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#### NATURAL GAS
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#### FIRE
FALCON FIRE PROTECTION DISTRICT
7030 OLD MERIDIAN RD.,
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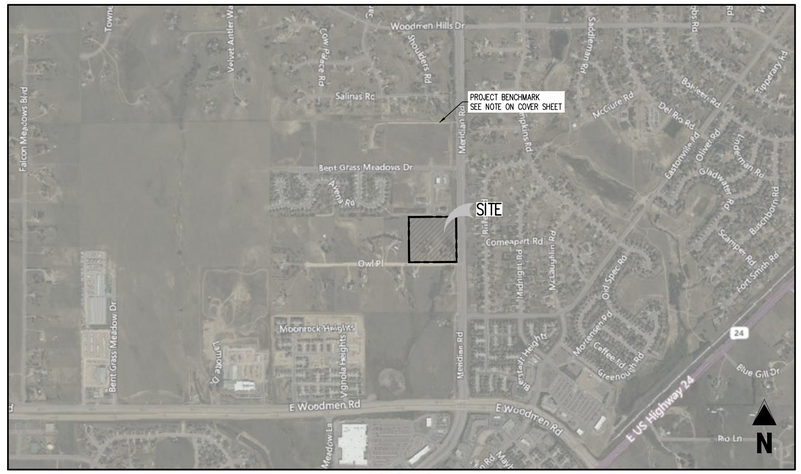
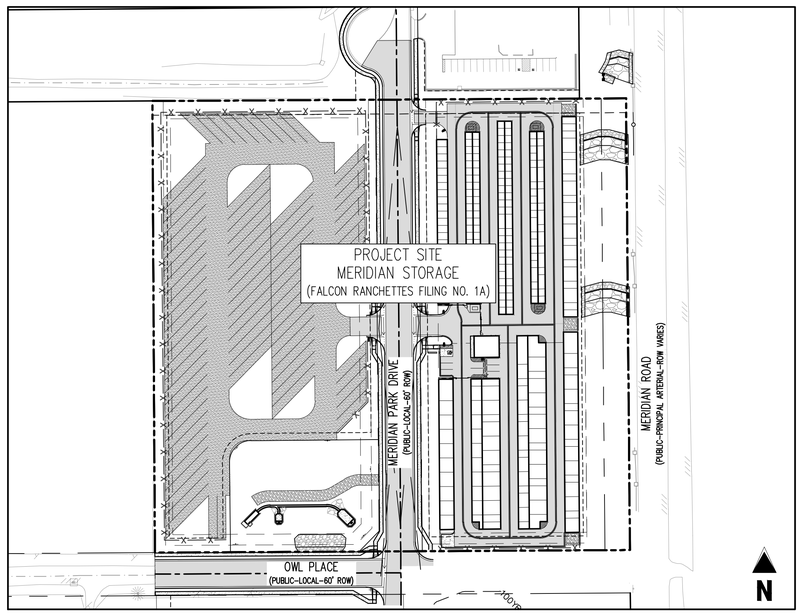
### LIST OF ABBREVIATIONS

SHT – SHEET
Δ – DEFLECTION ANGLE
L – LENGTH
R – RADIUS
CB – CHORD BEARING
C – CHORD LENGTH
N – NORTH/NORTHING
W – WEST
E – EAST/EASTING
S – SOUTH
DET – DETAIL
EX – EXISTING
W/ – WITH
PC – POINT OF CURVATURE/PORTLAND CEMENT
WWF – WELDED WIRE FABRIC
VERT – VERTICAL
OC – ON CENTER
FDC – FIRE DEPARTMENT CONNECTION
CT – COURT
DR – DRIVE
TYP – TYPICAL
REC – RECEPTION NUMBER
Ø, DIA – DIAMETER
PT – POINT OF TANGENCY
MIN – MINIMUM
MAX – MAXIMUM
HDPE – HIGH DENSITY POLYETHYLENE




VICINITY MAP
0 200 500 1000
SCALE: 1"=1000'




SITE MAP
0 20 50 100
SCALE: 1"=100'

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### LEGAL DESCRIPTION
A PARCEL OF LAND IN THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 13 SOUTH, RANGE 65 WEST, OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

LOTS 1 & 2, FALCON RANCHETTES, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK V-2, PAGE 15, OF THE RECORDS OF EL PASO COUNTY, COLORADO.

CONTAINING 9.604 ACRES, MORE OR LESS.

### BENCHMARK
THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

### BASIS OF BEARING
ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. BEARINGS ARE BASED ON THE SOUTH LINE OF LOTS 2, 3, & 4 OF FALCON RANCHETTES, AND IS CONSIDERED TO BEAR S89°40'45"W. DEFINED BY FOUND MONUMENTS AS FOLLOWS: A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHEAST CORNER OF LOT 2; AND A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHWEST CORNER OF LOT 4.

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

NOTE: CONTRACTOR MUST COORDINATE WORK WITH UTILITY COMPANY AND CITY PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR ALL MATERIALS, LABOR, REPAIRS, ETC. TO COMPLETE WORK AND RESTORE AREA TO SAME STATE PRIOR TO STARTING WORK.

CONTRACTOR RESPONSIBLE FOR AS-BUILT DRAWINGS, TESTS, REPORTS AND/OR ANY OTHER CERTIFICATES OR INFORMATION AS REQUIRED FOR ACCEPTANCE OF WORK FROM CITY, UTILITY DISTRICTS OR ANY OTHER GOVERNING AGENCY.

SURVEYOR TO OBTAIN AUTOCAD FILE FROM ENGINEER AND VERIFY ALL HORIZONTAL CONTROL DIMENSIONING PRIOR TO CONSTRUCTION STAKING. SURVEYOR MUST VERIFY ALL BENCHMARK, BASIS OF BEARING AND DATUM INFORMATION TO ENSURE IMPROVEMENTS WILL BE AT THE SAME HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DESIGN CONSTRUCTION DRAWINGS. PRIOR TO CONSTRUCTION STAKING ANY DISCREPANCY MUST BE REPORTED TO OWNER AND ENGINEER PRIOR TO CONTINUATION OF ANY FURTHER STAKING OR CONSTRUCTION WORK.

### CAUTION – NOTICE TO CONTRACTOR
1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.

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

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

### EL PASO COUNTY
COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/ OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/ OR ACCURACY OF THIS DOCUMENT. FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. — DATE
COUNTY ENGINEER / ECM ADMINISTRATOR

### OWNER'S STATEMENT
I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

Mike Texer — 05/15/2024
MIKE D. TEXER — DATE

### ENGINEER'S STATEMENT
THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED PROFESSIONAL ENGINEER 38164 BRADY A. SHYROCK 05/21/2024

BRADY A. SHYROCK, COLORADO P.E. NO. 0038164 — DATE


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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80831

| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

COVER SHEET

VR239 & PPR2336

C0.0
Sheet 1 of 25

## GENERAL CONSTRUCTION NOTES

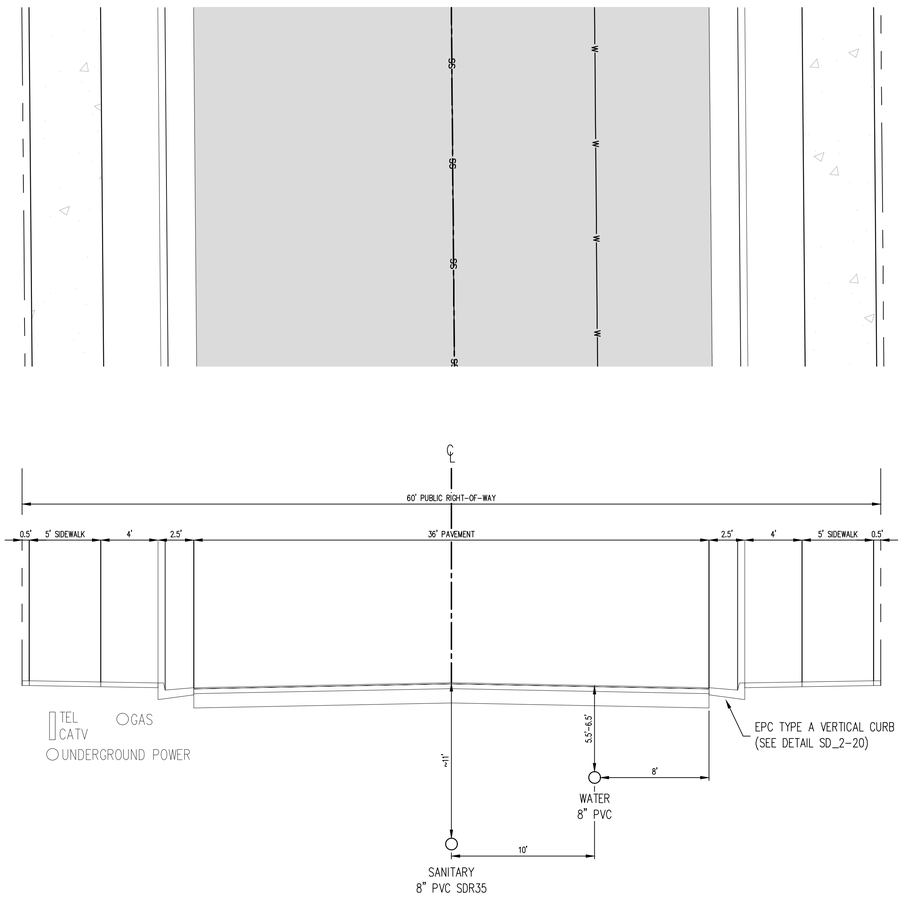
1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPLACED AT THE CONTRACTORS EXPENSE AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE AND / OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEERS RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION.
5. ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED.
6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K – 1.2C.
7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" IN THIS AREA.
8. ALL CULVERT AND STORM PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), OR REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNERS GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 – CULVERTS.
9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED FOR ROADS SHALL BE PER DESIGN REPORT BY OWNERS GEOTECHNICAL ENGINEER. OWNERS GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.
10. TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED.
11. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS AND WITH WOODMAN HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
12. ALL POTABLE WATER MAINS SHALL BE AWWA C900-SDR18 PVC WITH PUSH-ON SINGLE GASKET TYPE JOINTS AND SHALL MEET THE REQUIREMENTS OF ANSI / NSF 61.
13. ALL WATER MAIN FITTINGS SHALL BE MADE FROM GRAY-IRON OR DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A PRESSURE RATING OF 250 PSI AND SHALL MEET THE REQUIREMENTS OF ANSI / NSF 61.
14. ALL WATER LINE BENDS, TEES, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS AND / OR RODDING AND RESTRAINED PIPE PER THE PAINT BRUSH HILLS METRO DISTRICT CONSULTING ENGINEER APPROVAL.
15. MAXIMUM DEFLECTION OF 8" OR 12" PVC WATER MAIN JOINTS IS 4 DEGREES. CORRESPONDING MINIMUM CURVE RADIUS IS 286'. ADDITIONAL 11.25' OR 22.5' BENDS MAY BE REQUIRED FOR PROPER ALIGNMENT.
16. CONTRACTOR IS RESPONSIBLE FOR PROVIDING DETAILED AS-BUILTS OF ALL WATER MAIN, STORM SEWER AND SANITARY. SEWER MAIN INSTALLATIONS, INCLUDING ACCURATE DISTANCES OF MAIN LINES, VALVES, FITTINGS, MANHOLES AND LOCATIONS OF WATER AND SEWER SERVICES.
17. SANITARY SEWER PIPE AND FITTINGS: PVC 4" – 8" ASTM D3034, TYPE PSM, SDR 35; PUSH-ON JOINTS AND MOLDED RUBBER GASKETS MAXIMUM HORIZONTAL DEFLECTIONS, AFTER INSTALLATION AND BACK FILLING SHALL NOT EXCEED 3% OF THE PIPE DIAMETER. (MINIMUM CURVE RADIUS IS 100' FOR 8" PVC SANITARY SEWER MAIN)

## STANDARD NOTES FOR EPC CONSTRUCTION PLAN

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SMMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   D. CDOT M & S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DPW AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

## SIGNING AND STRIPING NOTES

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE D'SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4'UPPER-LOWER CASE LETTERING ON 8'BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6'LETTERING, UPPER-LOWER CASE ON 12'BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 35 MPH OR HIGHER SHALL HAVE 8'UPPER-LOWER CASE LETTERING ON 18'BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS". SIGNAL POLE MOUNTED AND OVERHEAD STREET NAME SIGNS SHALL BE PER MUTCD SIZE STANDARDS.
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75'X 1.75'SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100'MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24'IN WIDTH. CROSSWALKS LINES SHALL BE 12'WIDE AND 9'LONG.
12. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE.
13. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
14. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
15. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.




TYPICAL STREET SECTION – URBAN LOCAL ROADWAY
SCALE: 1"=5'

(MERIDIAN PARK DRIVE)
(OWL PLACE)

DESIGN SPEED LIMIT: 25 MPH
POSTED SPEED LIMIT: 25 MPH


Galloway
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05/21/2024


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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

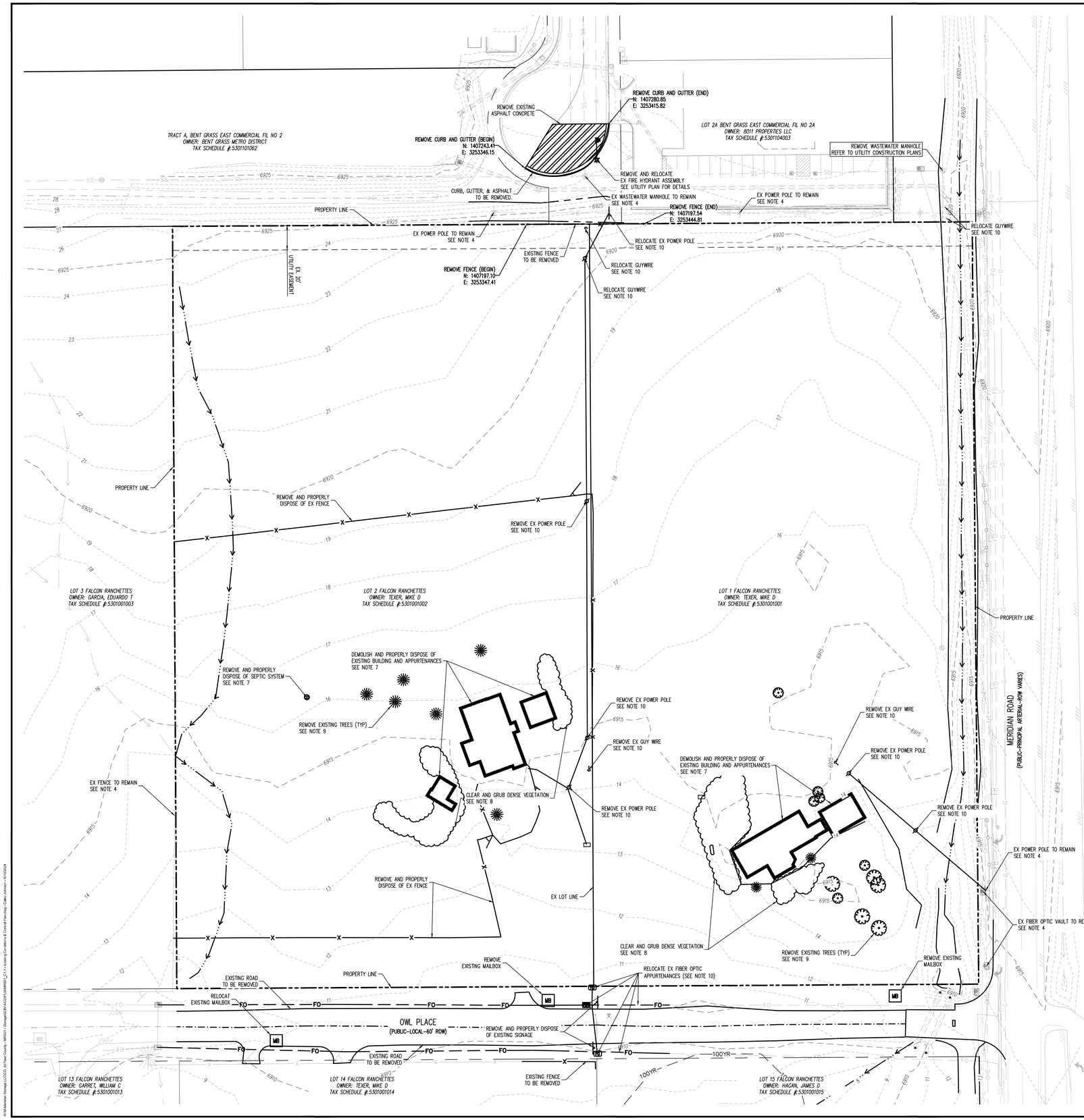
| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

NOTES

VR239 & PPR2336

C0.1




N

0 20 40

SCALE: 1"=40'

## DEMO LEGEND

- TO REMAIN
- TO BE REMOVED

## EXISTING CONDITIONS LEGEND

- 5460 — EXISTING MAJOR CONTOUR
- 52 — EXISTING MINOR CONTOUR
- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- EXISTING ROAD CENTERLINE
- EXISTING CURB AND GUTTER
- EXISTING SWALE LINE
- 100YR — FLOODPLAIN BOUNDARY
- EXISTING GUARDRAIL
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- G — EXISTING GAS LINE
- UT — EXISTING UNDERGROUND TELEPHONE
- OHE — EXISTING OVERHEAD ELECTRIC
- FO — EXISTING FIBER OPTIC LINE
- FO — EXISTING FIBER OPTIC STRUCTURES
- T — EXISTING TELEPHONE PEDESTAL
- TR — EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SIGN

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

NOTE: CONTRACTOR MUST COORDINATE WORK WITH UTILITY COMPANY AND CITY PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR ALL MATERIALS, LABOR, REPAIRS, ETC. TO COMPLETE WORK AND RESTORE AREA TO SAME STATE PRIOR TO STARTING WORK.

## DEMOLITION & SITE PREPARATION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS/ THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE CONST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT NO ADDITIONAL COST.
3. UNLESS SPECIFICALLY NOTED TO BE SAVED/STOCKPILED (R&S) OR REUSED/RELOCATED (R&R), ALL SITE FEATURES CALLED FOR REMOVAL (REM) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC, TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO COST TO THE OWNER.
4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
5. DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK
6. IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER, TO REUSE EXISTING GRAVEL IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATION FOR GRAVEL BORROW.
7. ALL ITEMS CALLED FOR REMOVAL SHALL BE REMOVED TO FULL DEPTH INCLUDING ALL FOOTINGS, FOUNDATIONS, AND OTHER APPURTENANCES, EXCEPT AS SPECIFICALLY NOTED OTHERWISE.
8. CLEAR AND GRUB VEGETATION' SHALL INCLUDE REMOVAL OF GRASS, SHRUBS, AND UNDERBRUSH, REMOVAL OF ROOTS, ROUGH GRADING, INSTALLATION OF LOAM (IF APPLICABLE), FINE GRADING, SEEDING AND TURF ESTABLISHMENT BY THE CONTRACTOR.
9. TREES DESIGNATED FOR REMOVAL SHALL BE TAGGED BY CONTRACTOR AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
10. CONTRACTOR RESPONSIBLE FOR COORDINATING WITH UTILITY PROVIDERS ON RELOCATION AND REMOVAL OF EXISTING IMPROVEMENTS

## BASIS OF BEARING

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. BEARINGS ARE BASED ON THE SOUTH LINE OF LOTS 2, 3, & 4 OF FALCON RANCHETTES, AND IS CONSIDERED TO BEAR S89°40'45"W. DEFINED BY FOUND MONUMENTS AS FOLLOWS: A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHEAST CORNER OF LOT 2; AND A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHWEST CORNER OF LOT 4.

## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

## CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.

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

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com

COLORADO REGISTERED PROFESSIONAL ENGINEER 38164 06/21/2024

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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

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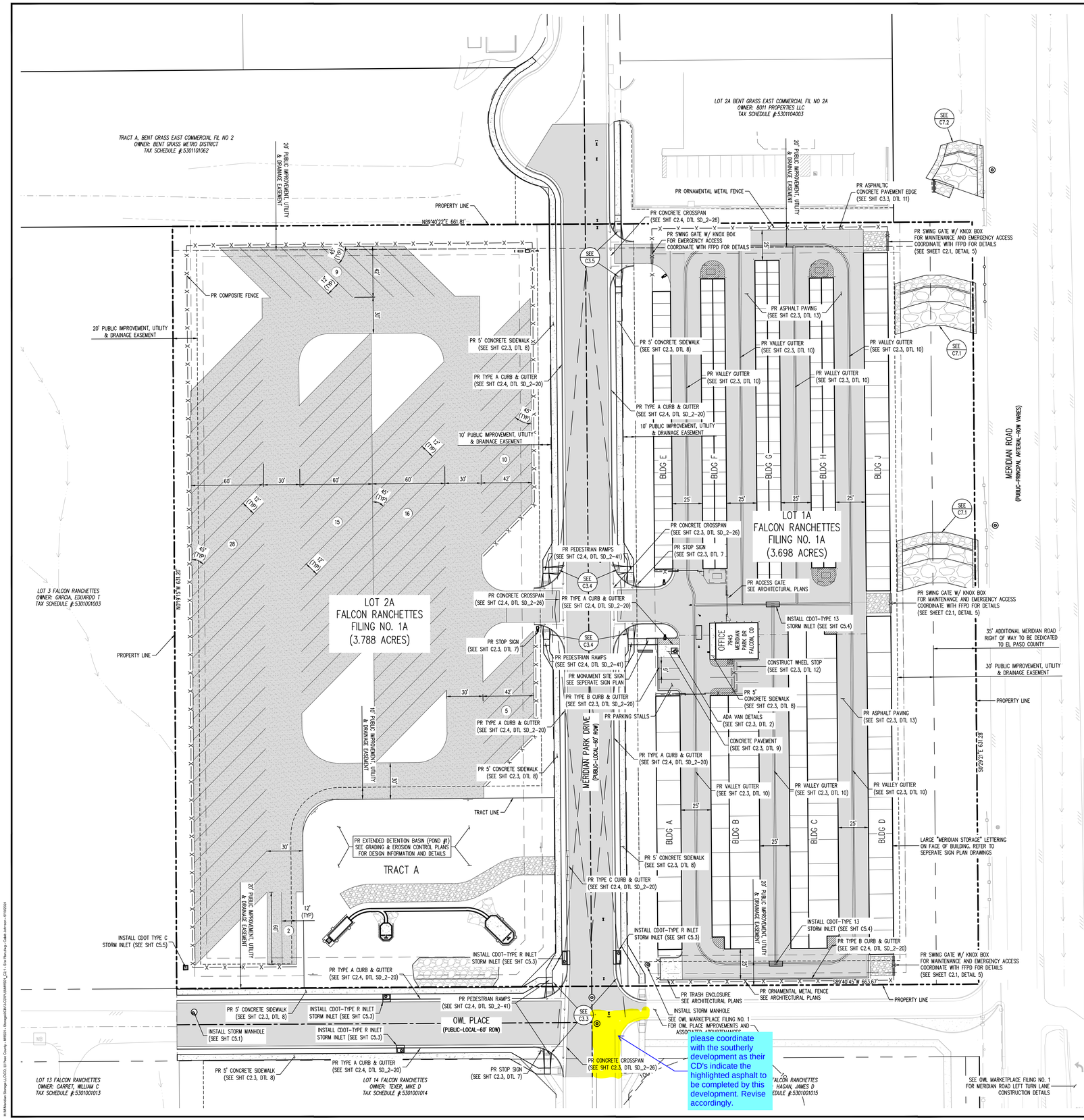
EXISTING CONDITIONS & DEMO PLAN

VR239 & PPR2336

C1.1

Sheet 3 of 25




N

SCALE: 1"=40'

## SITE LEGEND

- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR FLOODPLAIN BOUNDARY
- 31 PARKING STALL COUNT
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- 12" CLASS 6 AGGREGATE BASE COURSE OR CRUSHED FINES OVER COMPACTED SUBGRADE
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

## PAVING LEGEND

- PROPOSED CONCRETE
- EXISTING CONCRETE/ASPHALT PAVING
- PROPOSED ASPHALT PAVING

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING FIBER OPTIC STRUCTURES
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

SURVEYOR TO OBTAIN AUTOCAD FILE FROM ENGINEER AND VERIFY ALL HORIZONTAL CONTROL DIMENSIONING PRIOR TO CONSTRUCTION STAKING. SURVEYOR MUST VERIFY ALL BENCHMARK, BASIS OF BEARING AND DATUM INFORMATION TO ENSURE IMPROVEMENTS WILL BE AT THE SAME HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DESIGN CONSTRUCTION DRAWINGS. PRIOR TO CONSTRUCTION STAKING ANY DISCREPANCY MUST BE REPORTED TO OWNER AND ENGINEER PRIOR TO CONTINUATION OF ANY FURTHER STAKING OR CONSTRUCTION WORK.

## SOIL PREPARATION AND PAVEMENT DESIGN NOTE

SOIL PREPARATION AND PAVEMENT DESIGN SHALL BE PER RECOMMENDATIONS FROM A GEOTECHNICAL REPORT PREPARED FOR THIS SITE AS FOLLOWS: GEOTECHNICAL ENGINEERING EXPLORATION AND ANALYSIS: PROPOSED MERIDIAN STORAGE

**GEOTECHNICAL ENGINEER: UNIVERSAL ENGINEERING SCIENCES**
**PROJECT NO: 4430.2300005R2 DATE: APRIL 18, 2023 (REVISED FEBRUARY 22, 2024)**

THE CONTRACTOR MUST FULLY REVIEW THIS REPORT PRIOR TO CONSTRUCTION. INFORMATION IN THE GEOTECHNICAL REPORT SUPERSEDES ANY CONFLICTING INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS. REFER TO GENERAL STRUCTURAL NOTES FOR SPECIFIC SOIL PREPARATION AT SITE STRUCTURES.

## BASIS OF BEARING

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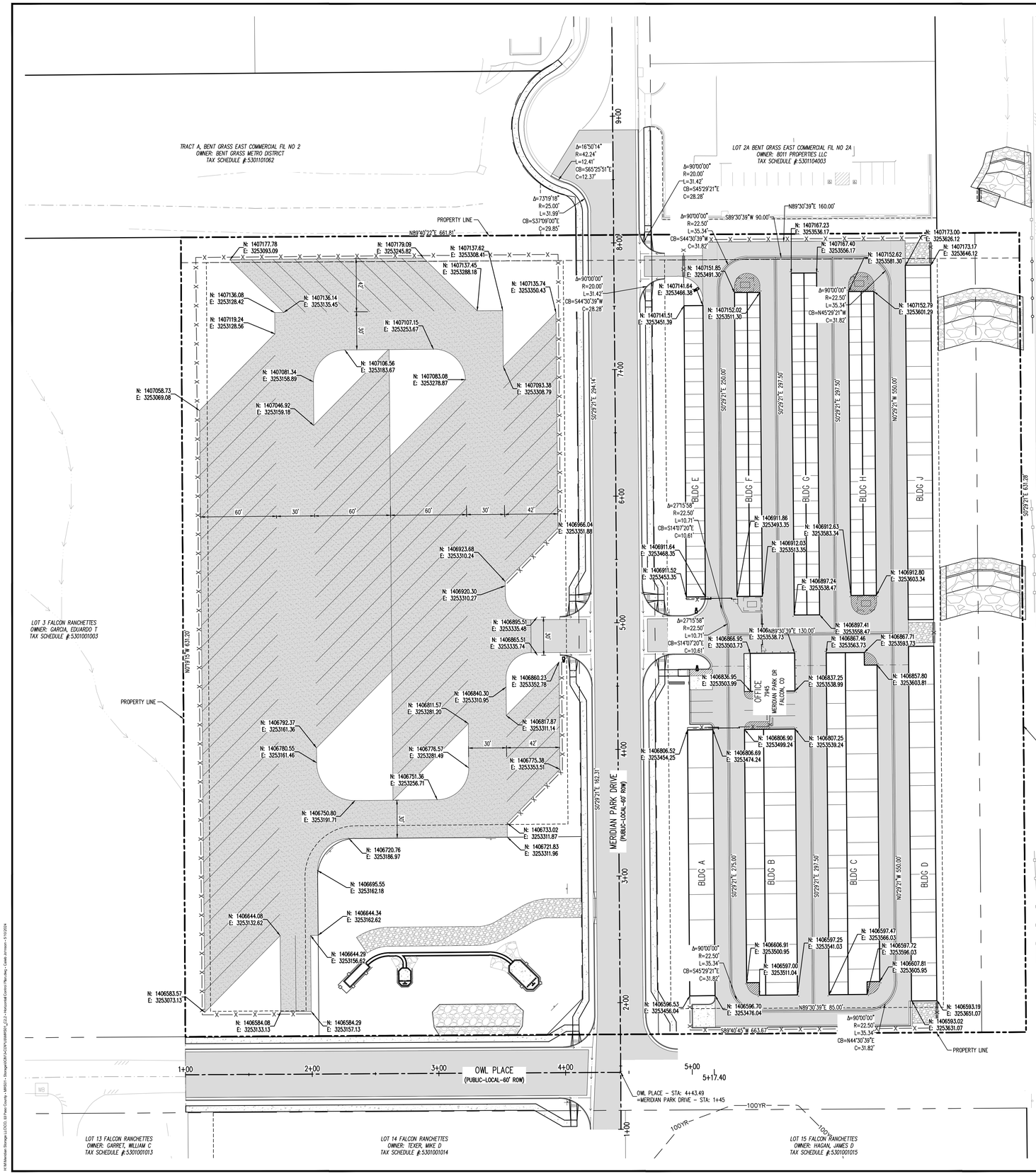
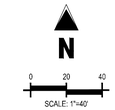
SITE PLAN

VR239 & PPR2336

C2.1

Sheet 4 of 25




## SITE LEGEND

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- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

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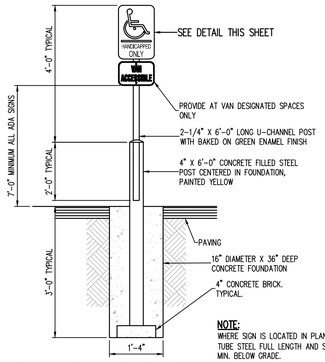
HORIZONTAL CONTROL PLAN

VR239 & PPR2336

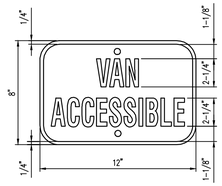
C2.2

Sheet 5 of 25



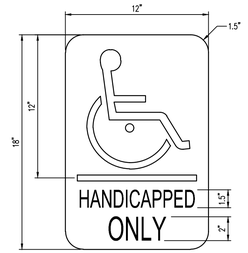

NOTE:
WHERE SIGN IS LOCATED IN PLANTER AREA, USE 2" x 2" TUBE STEEL FULL LENGTH AND SET IN CONCRETE 3'-0" MIN. BELOW GRADE.

1 HANDICAP PARKING SIGN POST
NOT TO SCALE



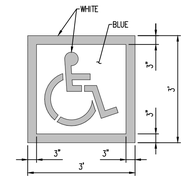

MATERIAL:
1. 0.060 ALUMINUM – BLUE BACKGROUND WITH WHITE COPY AND BORDER, 1-1/2" RADIUS CORNERS, WHITE, 2 MOUNTING HOLES.
2. SIGN USED WITH CORRESPONDING VAN SPACE.

2 "VAN ACCESSIBLE" SIGN
NOT TO SCALE



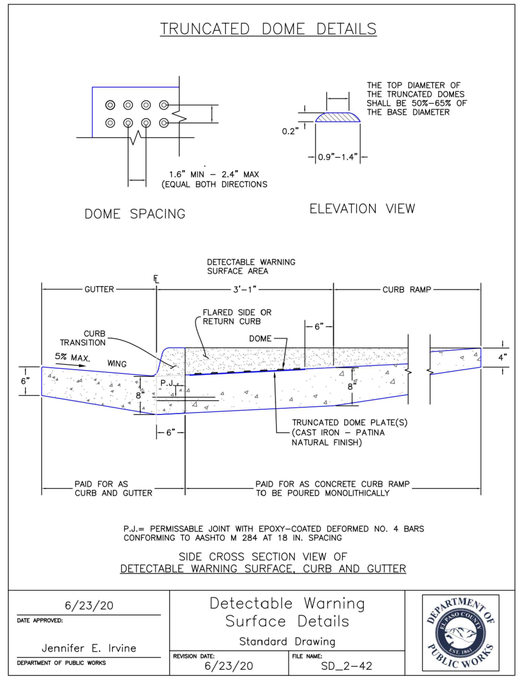

MATERIAL:
0.060 ALUMINUM – WHITE BACKGROUND WITH BLUE COPY AND BORDER – SYMBOL HAS BLUE BACKGROUND, WHITE COPY WITH BLACK BORDER 1-1/2" RADIUS CORNERS WHITE 2 MOUNTING HOLES.

3 HANDICAP PARKING SIGN
NOT TO SCALE



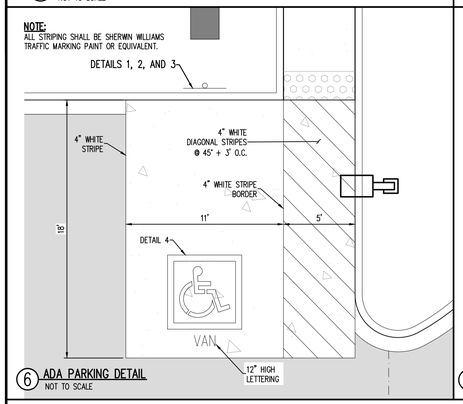

NOTES:
1. PROVIDE TWO COATS OF PAINT
2. BLUE BACKGROUND WITH WHITE SYMBOL

4 PAINTED ADA PARKING SYMBOL
NOT TO SCALE

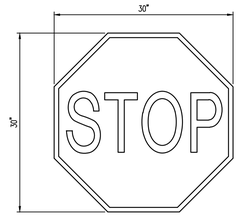



5 TRUNCATED DOMES
NOT TO SCALE

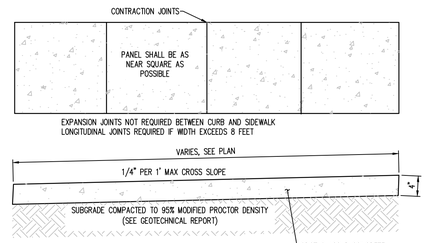
NOTE:
ALL STRIPING SHALL BE SHERWIN WILLIAMS TRAFFIC MARKING PAINT OR EQUIVALENT.




6 ADA PARKING DETAIL
NOT TO SCALE

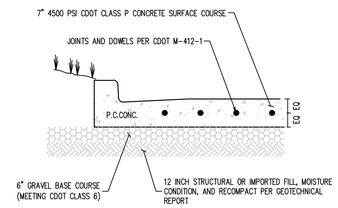



7 MUTCD R1-1 "STOP" SIGN DETAIL
NOT TO SCALE

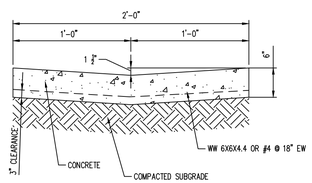



NOTES:
1. CONTRACTION JOINTS SHALL BE SPACED SO AS TO FORM AS NEAR SQUARE PANEL AS POSSIBLE. NO SINGLE PANEL SHALL EXCEED 8' ON ANY SIDE. CONTRACTION JOINTS SHALL BE 3/4" DEEP.
2. EXPANSION JOINTS OF 1/2" MASTIC MATERIAL SHALL BE PLACED AT P.C.'S AND P.T.'S OF CURVES, AT GRADE BREAKS, AT DRIVEWAYS, AND AT OTHER LOCATIONS AS SPECIFIED BY THE ENGINEER.
3. CONSTRUCTION MATERIALS AND PROCEDURES SHALL CONFORM TO EXISTING COUNTY AND STATE STANDARD SPECIFICATIONS.

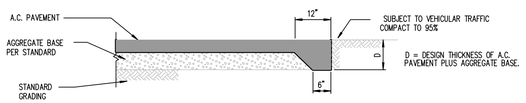
8 CONCRETE SIDEWALK
NOT TO SCALE



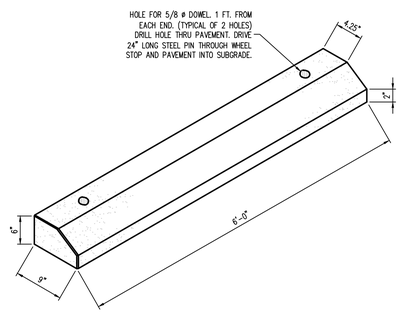

9 CONCRETE PAVEMENT SECTION
NOT TO SCALE




10 CONCRETE VALLEY GUTTER
NOT TO SCALE



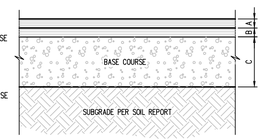

11 ASPHALT EDGE DETAIL
NOT TO SCALE




12 WHEEL STOP
NOT TO SCALE

STANDARD DUTY PAVING
A = 1" ASPHALT CONCRETE – SURFACE COURSE
B = 2" ASPHALT CONCRETE – BASE COURSE
C = 8" AGGREGATE BASE COURSE

MAIN CORRIDOR AND TRUCK ACCESS
A = 2" ASPHALT CONCRETE – SURFACE COURSE
B = 2" ASPHALT CONCRETE – BASE COURSE
C = 12" AGGREGATE BASE COURSE




NOTES:
1. SUBGRADE COMPACTION: PER PROJECT SPECIFICATIONS.
2. BASE COURSE TO CONFORM TO CDOT CLASS 5 OR 6 DESIGNATION, MOISTURE TREATED TO WITHIN 2% OF OPTIMUM AND COMPACTED TO AT LEAST 95% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY.
3. ALL SUBGRADE AND PAVEMENT OPERATIONS AND MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS OF THE CURRENT CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. PROVIDE TACK COAT BETWEEN CONSECUTIVE COURSES NOT APPLIED WITHIN 24 HOURS OF PLACEMENT OF THE PRIOR COURSE.
5. MINIMUM AGGREGATE BASE COURSE THICKNESS SHALL BE AS INDICATED IN THE GEOTECHNICAL REPORT.

13 ASPHALT PAVING
NOT TO SCALE


Galloway
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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

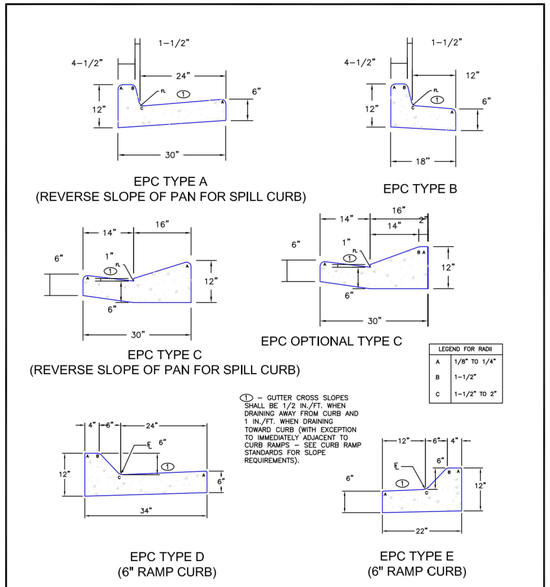
| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

SITE DETAILS

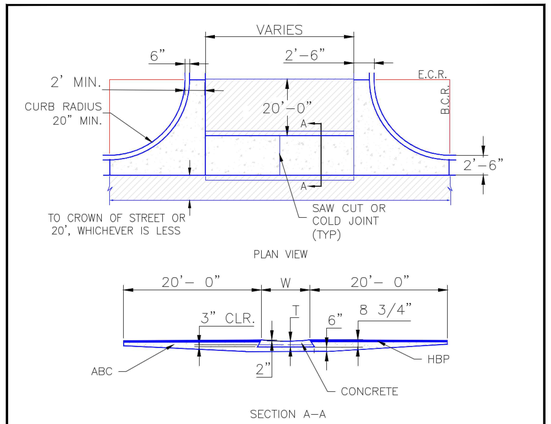
VR239 & PPR2336

C2.3




SCALE: NOT TO SCALE

| | | |
|---|---|---|
| 6/23/20<br>DATE APPROVED:<br>Jennifer E. Irvine<br>DEPARTMENT OF PUBLIC WORKS | Typical Curb and Gutter Details<br>Standard Drawing<br>REVISION DATE: 6/23/20 FILE NAME: SD_2–20 | DEPARTMENT OF PUBLIC WORKS |




NOTES

1. W – WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.

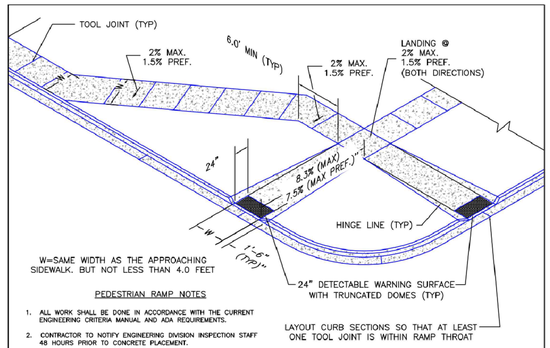
2. T – SQUARED–OFF RETURN TO BE POURED MONOLITHICALLY, 8" PCC FOR LOCAL ROADS, 9" FOR COLLECTORS WITH 6x6 – 4.4 W.W.F. OR #4 REINFORCING BAR @ 18" EACH WAY.

3. ▭ = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).

4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR.

SCALE: NOT TO SCALE

| | | |
|---|---|---|
| 8/11/11<br>DATE APPROVED:<br>André P. Brackin<br>DEPARTMENT OF TRANSPORTATION | Typical Cross Pan Layout Detail<br>Standard Drawing<br>REVISION DATE: 12/8/15 FILE NAME: SD_2–26 | EL PASO COUNTY DEPARTMENT OF TRANSPORTATION |



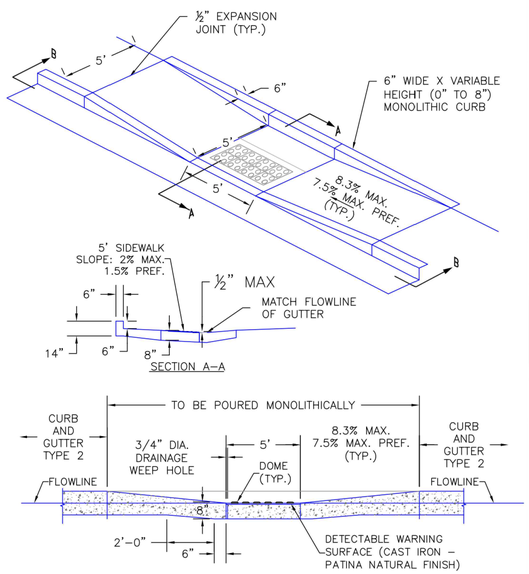

PEDESTRIAN RAMP NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON–COLORED, NON–SCORED, COARSE BROOM FINISH.
4. PEDESTRIAN CURB RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 8.3% MAXIMUM RUNNING RAMP SLOPE DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS. SEE ECM SECTION 6.3.6 FOR PEDESTRIAN PUSHBUTTON LOCATION REQUIREMENTS.
5. DETECTABLE WARNING SURFACE SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED, CAST IRON (PATINA NATURAL FINISH) AND IN ACCORDANCE WITH ECM CHAPTER 6 AND SD_2–42. THERMOPLASTIC TRUNCATED DOMES AND PAVERS WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING SURFACE SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. PEDESTRIAN CURB RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK; 4' MINIMUM.
9. ALL PEDESTRIAN CURB RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID–BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
10. DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, OR OTHER OBSTRUCTIONS WITHIN PROPOSED PEDESTRIAN CURB RAMP AREAS AND LANDINGS ARE PROHIBITED.
11. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A RAMP SHALL NOT EXCEED 5%.

GENERAL NOTES

1. WHERE THE 1'–6" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10:1.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF EXISTING OR FUTURE PEDESTRIAN RAMPS ON OPPOSITE CORNERS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUSIVE OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

| | | |
|---|---|---|
| 6/23/20<br>DATE APPROVED:<br>Jennifer E. Irvine<br>DEPARTMENT OF PUBLIC WORKS | Pedestrian Curb Ramp Detail<br>Standard Drawing<br>REVISION DATE: 6/23/20 FILE NAME: SD_2–41 | DEPARTMENT OF PUBLIC WORKS |




SCALE: NOT TO SCALE

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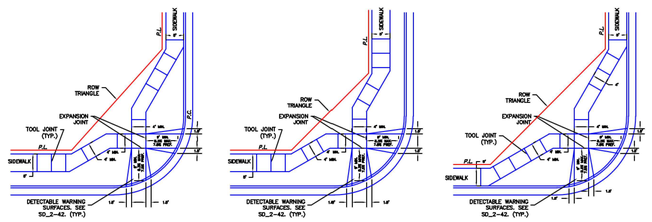
| 6/23/20<br>DATE APPROVED:<br>Jennifer E. Irvine<br>DEPARTMENT OF PUBLIC WORKS | Parallel Pedestrian Curb Ramp Detail<br>Standard Drawing<br>REVISION DATE: 6/23/20 FILE NAME: SD_2–50 | DEPARTMENT OF PUBLIC WORKS |




SCALE: NOT TO SCALE

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| 6/23/20<br>DATE APPROVED:<br>Jennifer E. Irvine<br>DEPARTMENT OF PUBLIC WORKS | Pedestrian Curb Ramp Detail<br>Standard Drawing<br>REVISION DATE: 6/23/20 FILE NAME: SD_2–40 | DEPARTMENT OF PUBLIC WORKS |


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| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

SITE DETAILS

VR239 & PPR2336

C2.4

## SITE LEGEND

- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING FIBER OPTIC STRUCTURES
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE

## NOTES

(A) PEDESTRIAN RAMP, SEE DETAILS (EPC SD_2-40 & SD_2-41)

(B) PROPOSED 6' CONCRETE CROSS PAN, SEE DETAIL (EPC SD_2-26)

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

NOTE: CONTRACTOR MUST COORDINATE WORK WITH UTILITY COMPANY AND CITY PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR ALL MATERIALS, LABOR, REPAIRS, ETC. TO COMPLETE WORK AND RESTORE AREA TO SAME STATE PRIOR TO STARTING WORK.

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## PAVING LEGEND

- PROPOSED CONCRETE
- EXISTING CONCRETE/ASPHALT PAVING
- PROPOSED ASPHALT PAVING

## BASIS OF BEARING

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. BEARINGS ARE BASED ON THE SOUTH LINE OF LOTS 2, 3, & 4 OF FALCON RANCHETTES, AND IS CONSIDERED TO BEAR S89°40'45"W. DEFINED BY FOUND MONUMENTS AS FOLLOWS: A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHEAST CORNER OF LOT 2; AND A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHWEST CORNER OF LOT 4.

## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

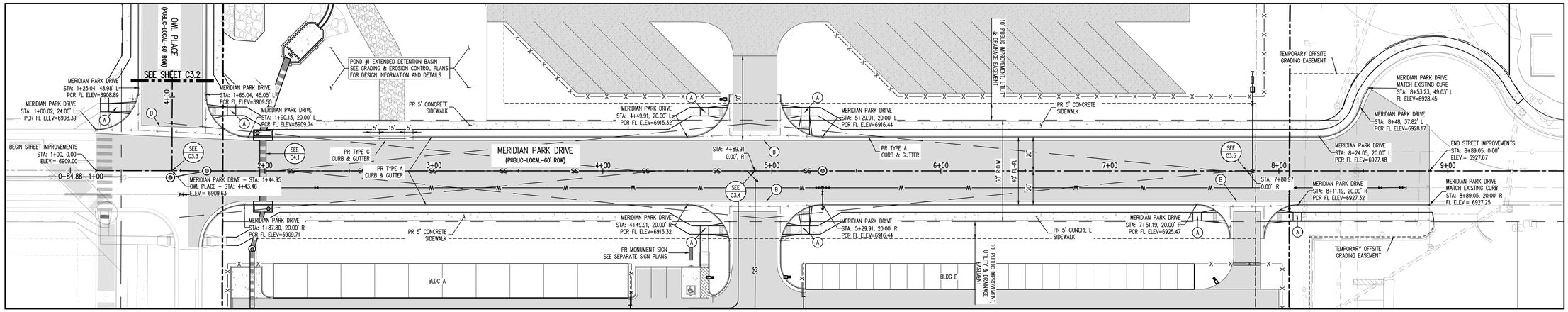
## CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

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

N

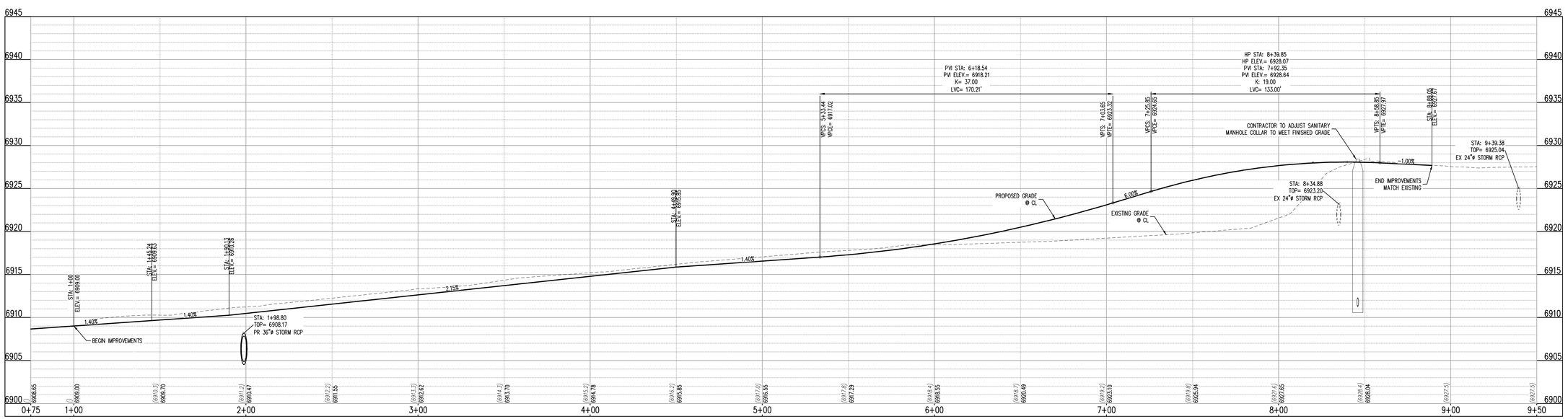
SCALE: 1"=30'







MERIDIAN PARK DRIVE – PUBLIC 60' R.O.W.
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=30'




MERIDIAN DRIVE PARK (STA: 0+75 – 9+50)
SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'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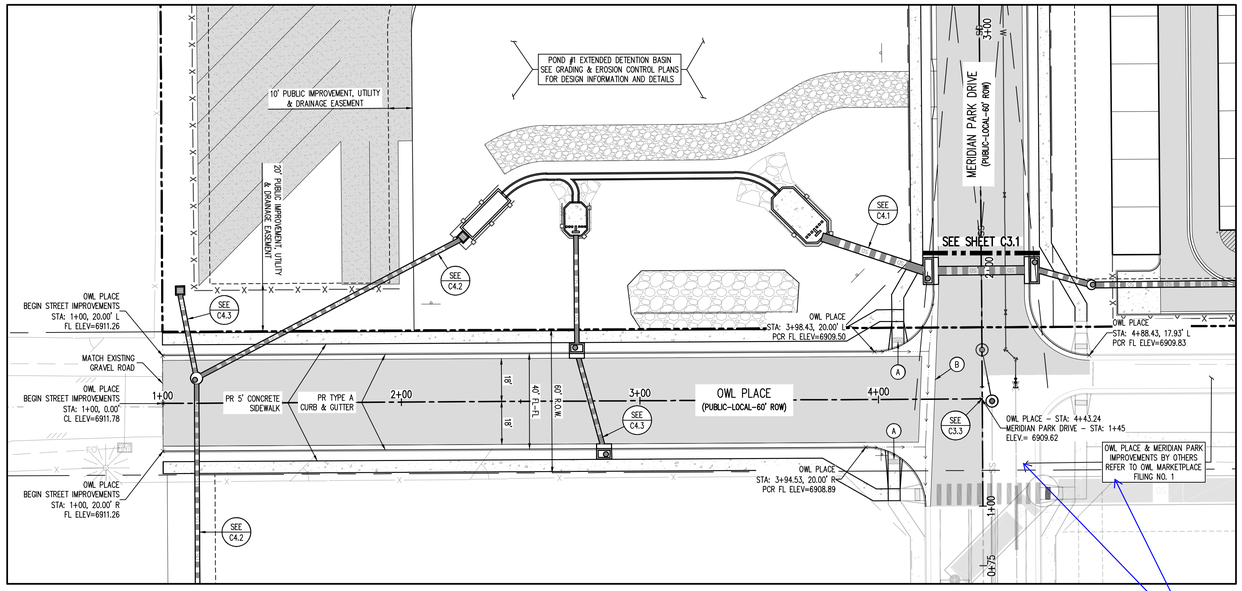
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

MERIDIAN PARK DRIVE

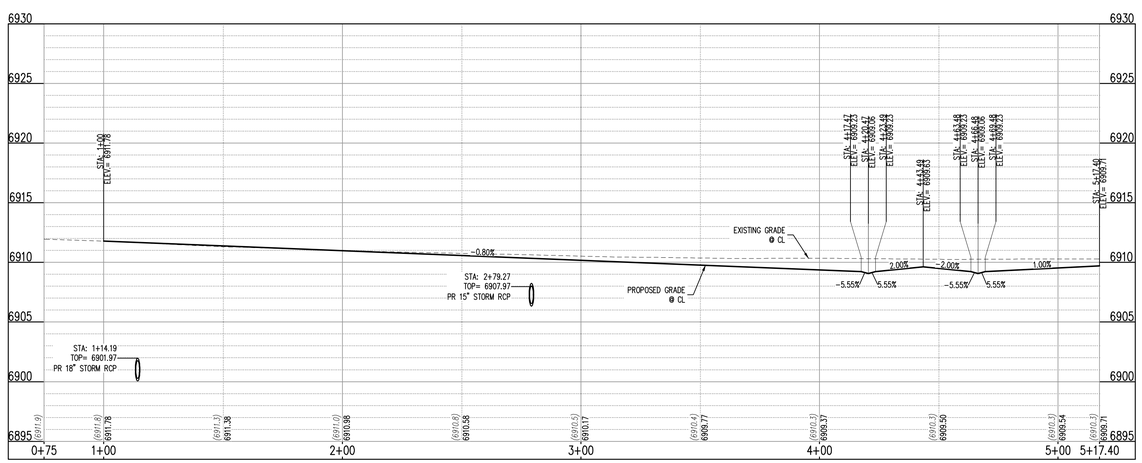
VR239 & PPR2336

C3.1
Sheet 8 of 25

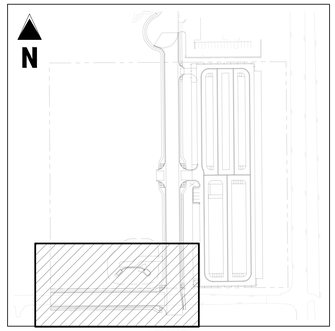



OWL PLACE – PUBLIC 60' R.O.W.
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=30'

see comment on sheet C2.1 and revise accordingly.




OWL PLACE (STA: 0+75 – 5+17.40)
SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'




KEYMAP
SCALE: 1"=200'

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING FIBER OPTIC STRUCTURES
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- EXISTING POWER POLE
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- PROPOSED STREET LIGHT
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- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
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## SITE LEGEND

- PROJECT BOUNDARY LINE
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- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

## PAVING LEGEND

- PROPOSED CONCRETE
- EXISTING CONCRETE/ASPHALT PAVING
- PROPOSED ASPHALT PAVING

## NOTES

(A) PEDESTRIAN RAMP, SEE DETAILS (EPC SD_2-40 & SD_2-41)

(B) PROPOSED 6' CONCRETE CROSS PAN, SEE DETAIL (EPC SD_2-26)

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## BASIS OF BEARING

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4,
MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP
STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

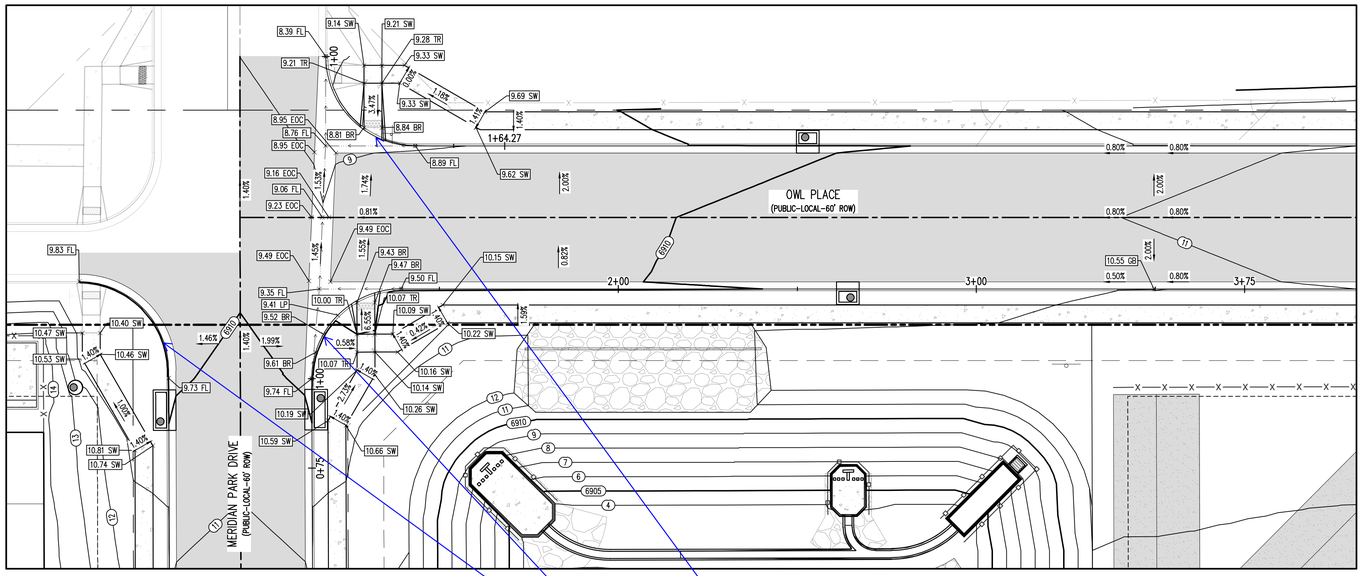
| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

OWL PLACE

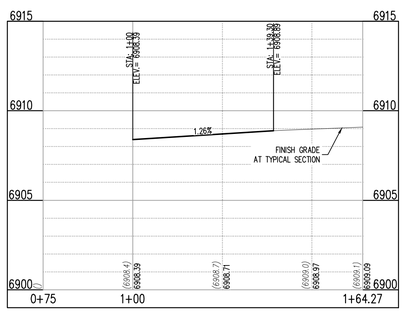
VR239 & PPR2336

C3.2

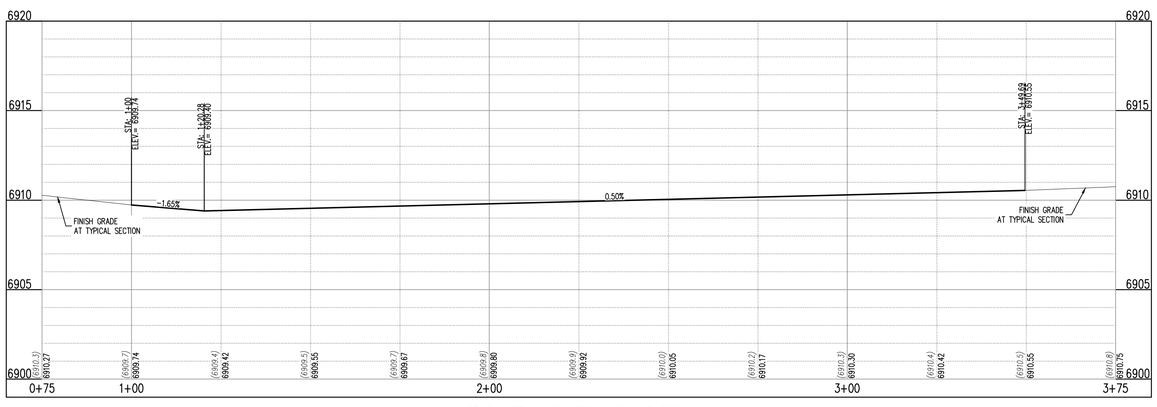



MERIDIAN PARK DRIVE (B) & OWL PLACE (A) – PUBLIC 60' R.O.W.
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=20'

Please provide the curb return radii for the intersection as it appears to have been removed.



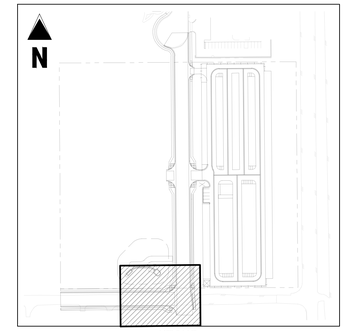

ST-B & ST-A (SW) (STA: 1+00 – 2+63.21)
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=4'




ST-B & ST-A (NW) (STA: 1+00 – 3+51.84)
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=4'

N

0 10 20
SCALE: 1"=20'




KEYMAP
SCALE: 1"=200'

## UTILITY LEGEND

| | |
|---|---|
| W | EXISTING WATER LINE |
| W | PROPOSED WATER LINE |
| SS | EXISTING SANITARY SEWER |
| SS | PROPOSED SANITARY SEWER |
| SD | EXISTING STORM SEWER |
| | PROPOSED STORM SEWER |
| G | EXISTING GAS LINE |
| G | PROPOSED GAS LINE |
| UT | EXISTING UNDERGROUND TELEPHONE |
| OHE | EXISTING OVERHEAD ELECTRIC |
| FO | EXISTING FIBER OPTIC LINE |
| FO FDC | EXISTING FIBER OPTIC STRUCTURES |
| TL | EXISTING TELEPHONE PEDESTAL |
| TR | EXISTING ELECTRIC TRANSFORMER |
| PL | EXISTING POWER POLE |
| | EXISTING STREET LIGHT |
| | PROPOSED STREET LIGHT |
| | PROPOSED WATER METER |
| | EXISTING WATER VALVE |
| | PROPOSED WATER VALVE |
| | EXISTING FIRE HYDRANT |
| | PROPOSED FIRE HYDRANT |
| SD | EXISTING STORM SEWER MANHOLE |
| | PROPOSED STORM SEWER MANHOLE |
| SS | EXISTING SANITARY SEWER MANHOLE |
| | PROPOSED SANITARY SEWER MANHOLE |

## DETAIL GRADING LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY LINE |
| | ADJACENT PROPERTY BOUNDARY LINE |
| | RIGHT OF WAY BOUNDARY LINE |
| | PROPOSED LOT LINE |
| | PROPOSED EASEMENT LINE |
| | ROAD CENTERLINE |
| | PROPOSED SWALE FLOWLINE |
| | PROPOSED CURB AND GUTTER |
| | PROPOSED SIDEWALK |
| 5465 | PROPOSED MAJOR CONTOUR |
| 66 | PROPOSED MINOR CONTOUR |
| 2.00% | PROPOSED SLOPE – PERCENT |
| 4:1 | PROPOSED SLOPE – RISE/RUN |
| 89.00 HP | PROPOSED SPOT ELEVATION – HIGH POINT |
| 89.00 LP | PROPOSED SPOT ELEVATION – LOW POINT |
| 89.00 TR | PROPOSED SPOT ELEVATION – TOP OF RAMP |
| 89.00 BR | PROPOSED SPOT ELEVATION – BOTTOM OF RAMP |
| 89.00 FL | PROPOSED SPOT ELEVATION – FLOW LINE |
| 89.00 CL | PROPOSED SPOT ELEVATION – ROADWAY CENTER LINE |
| 89.00 TBC | PROPOSED SPOT ELEVATION – TOP BACK OF CURB |
| 89.00 LIP | PROPOSED SPOT ELEVATION – LIP OF GUTTER |
| 89.00 FG | PROPOSED SPOT ELEVATION – FINISHED GRADE |
| 89.00 SW | PROPOSED SPOT ELEVATION – SIDEWALK |
| 89.00 EOC | PROPOSED SPOT ELEVATION – EDGE OF CONCRETE |
| 89.00 EOA | PROPOSED SPOT ELEVATION – EDGE OF ASPHALT |

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

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## BASIS OF BEARING

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4,
MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP
STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

## CAUTION – NOTICE TO CONTRACTOR

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

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719.900.7220
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COLORADO REGISTERED PROFESSIONAL ENGINEER 38164
06/21/2024


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| # | Date | Issue / Description | Init. |
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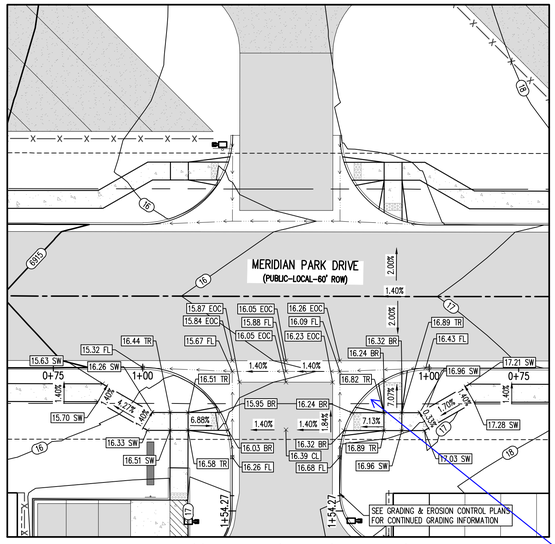
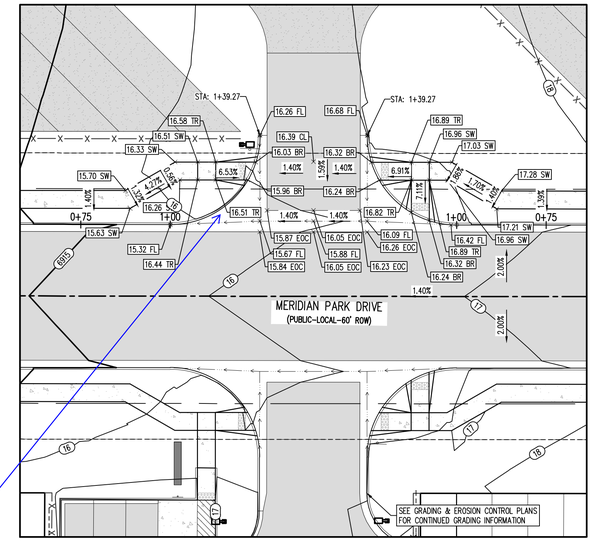
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

INTERSECTION DETAILS

C3.3

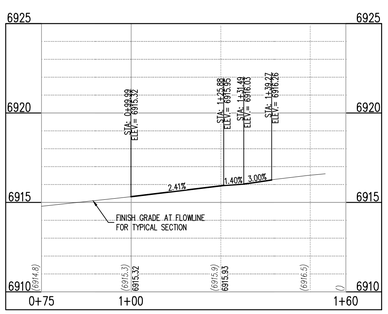



MERIDIAN PARK DRIVE (B) & STREET C (EAST SIDE) – PUBLIC 60' R.O.W.
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=20'

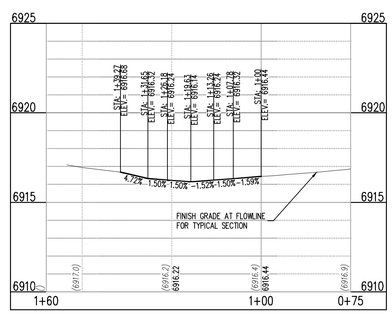



MERIDIAN PARK DRIVE (B) & STREET C (WEST SIDE) – PUBLIC 60' R.O.W.
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=20'

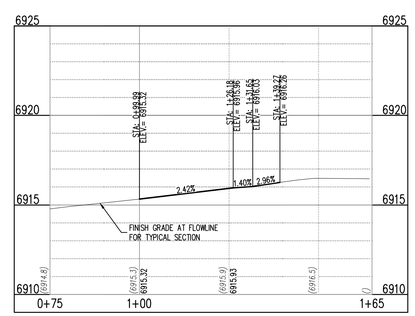
provide the curb return radii per recommendations in the TIS



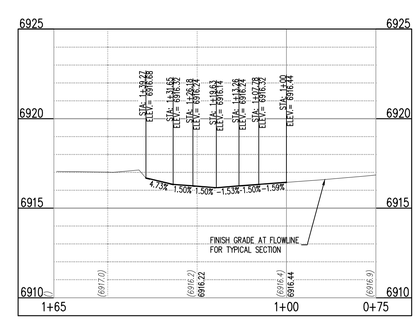

ST-B & ST-C (EAST) (SE) (STA: 0+75 – 1+54.27)
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=4'




ST-B & ST-C (EAST) (NE) (STA: 0+75 – 1+54.27)
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=4'




ST-B & ST-C (WEST) (SW) (STA: 0+75 – 1+64.27)
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=4'




ST-B & ST-C (WEST) (NW) (STA: 0+75 – 1+64.27)
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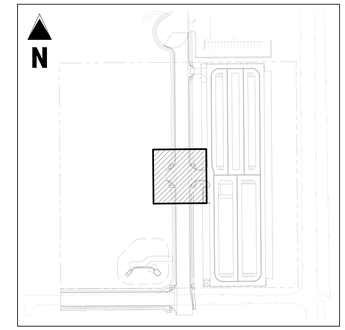

KEYMAP
SCALE: 1"=200'

## DETAIL GRADING LEGEND

| | |
|---|---|
| | PROPERTY BOUNDARY LINE |
| | ADJACENT PROPERTY BOUNDARY LINE |
| | RIGHT OF WAY BOUNDARY LINE |
| | PROPOSED LOT LINE |
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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

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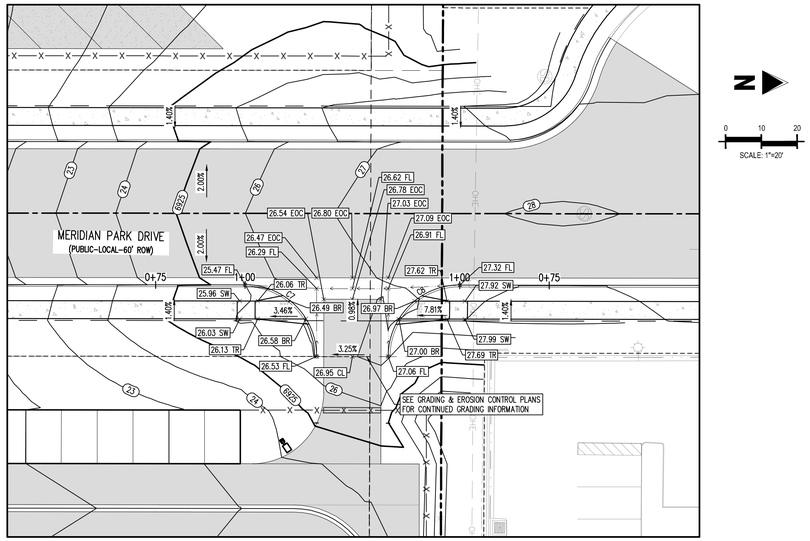
| Date: | 05/06/2024 |

INTERSECTION DETAILS

C3.4
Sheet 11 of 25

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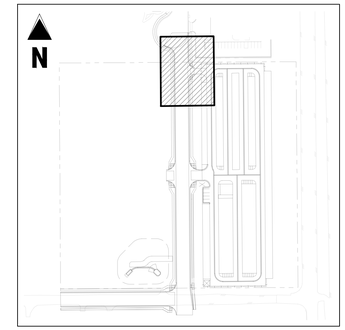
25 MPH DESIGN SPEED (LOCAL)
SCALE: 1"=20'




KEYMAP
SCALE: 1"=200'

| FLOW LINE CURVE SEGMENT TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE TAG # | DELTA | LENGTH (FT) | RADIUS (FT) | CHORD BEARING | CHORD LENGTH (FT) |
| C7 | 90°00'00" | 31.42 | 20.00 | S44°30'39"W | 28.28 |
| C8 | 90°00'00" | 31.42 | 20.00 | S45°29'21"E | 28.28 |

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
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- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
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- PROPERTY BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY BOUNDARY LINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
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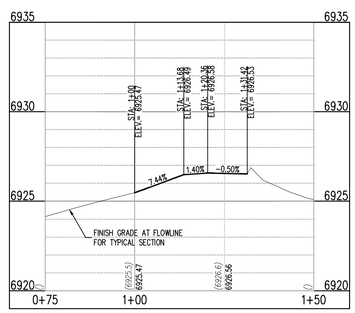


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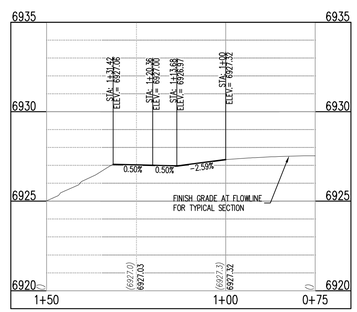
SCALES: HORIZONTAL 1"=20', VERTICAL 1"=6'

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4,
MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP
STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

## CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.

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

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.


Galloway
1155 Kelly Johnson Blvd., Suite 305
Colorado Springs, CO 80920
719.900.7220
GallowayUS.com


COLORADO REGISTERED 38164 PROFESSIONAL ENGINEER 05/21/2024


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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

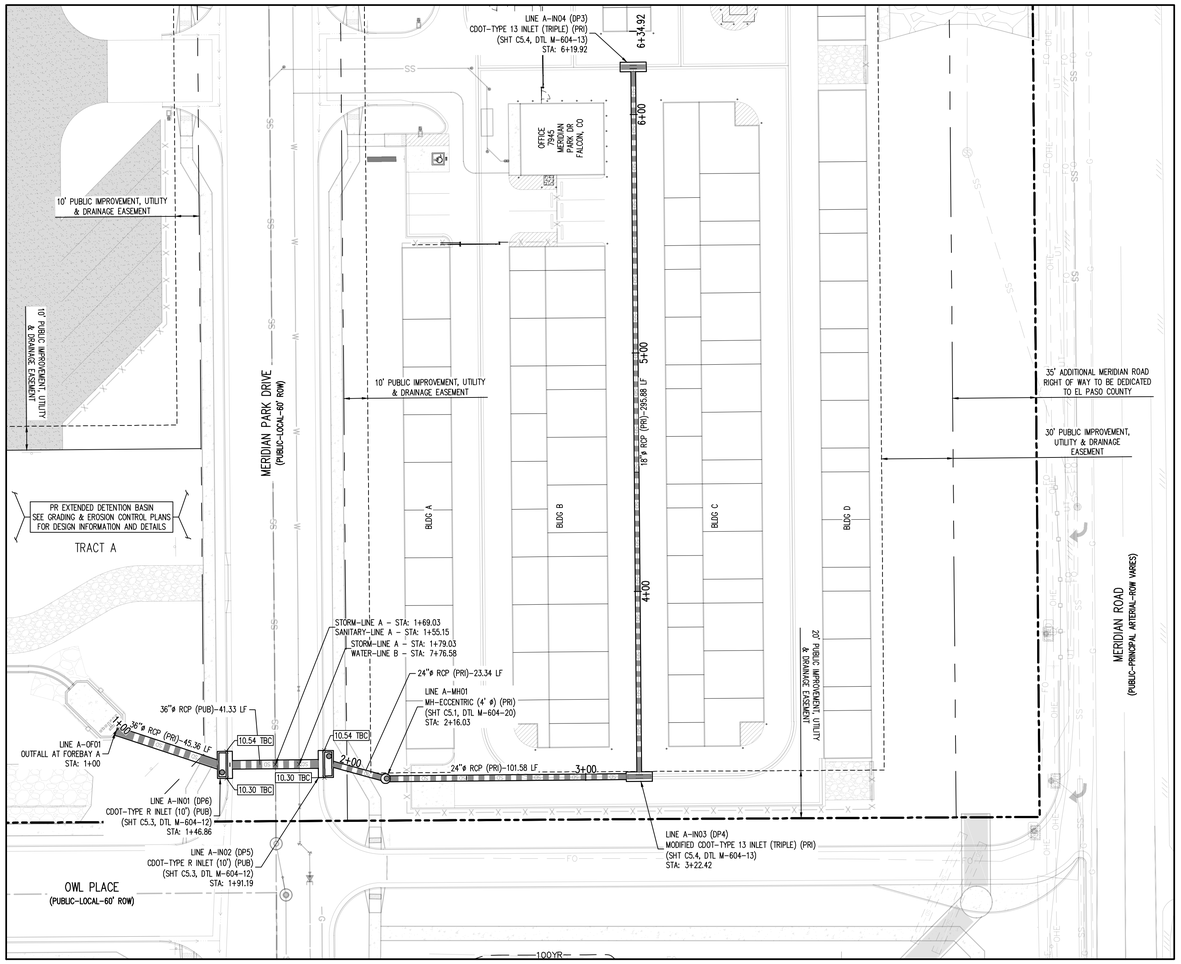
STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

| # | Date | Issue / Description | Init. |
|---|---|---|---|
| | | | |

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

INTERSECTION DETAILS

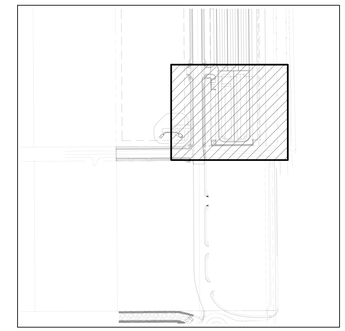
C3.5




STORM DRAIN PLAN – LINE A
SCALE: 1"=30'

N

0 15 30
SCALE: 1"=30'



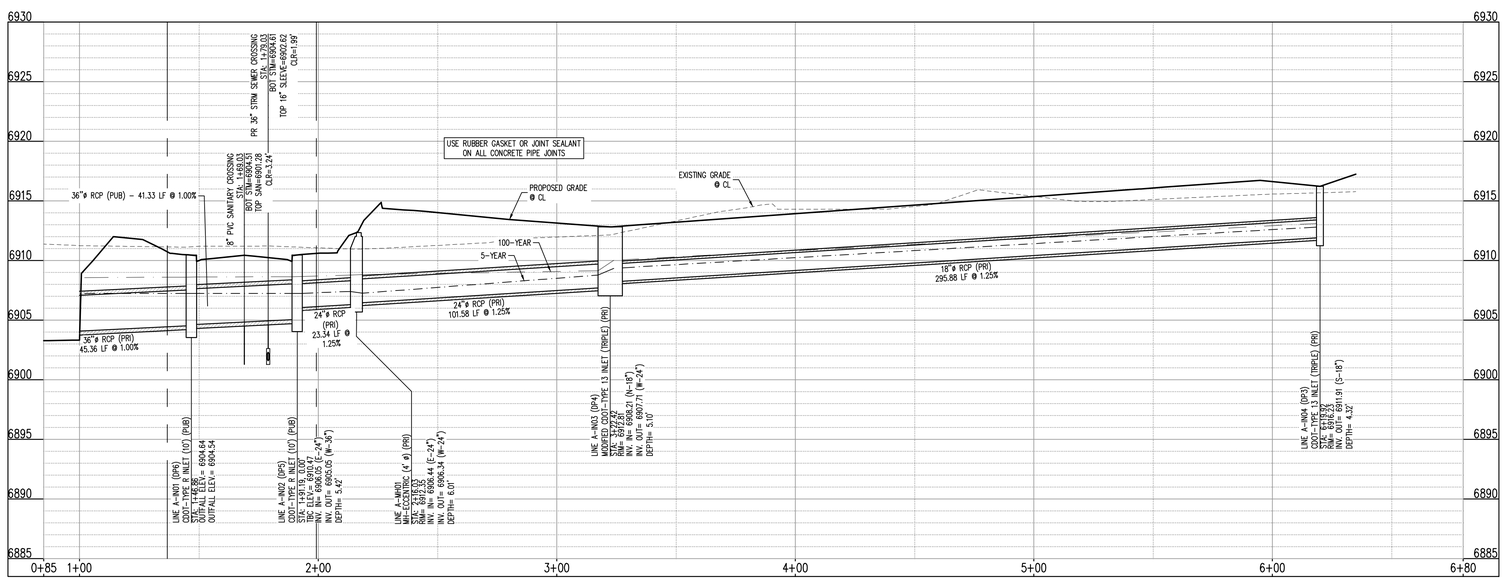
KEYMAP
SCALE: 1"=300'

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING FIBER OPTIC STRUCTURES
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE

## SITE LEGEND

- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS




STORM DRAIN PROFILE – LINE A (STA: 0+85 – 6+58.84)
SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'

| CALCULATIONS TO TOP OF PIPE (TOP) FOR REINFORCED CONCRETE PIPE (RCP) ASSUMES WALL THICKNESS AS SHOWN BELOW: | | |
|---|---|---|
| PIPE I.D. (INCHES) | WALL THICKNESS (INCHES) | PIPE O.D. (INCHES) |
| 12 | 2.00 | 16.00 |
| 15 | 2.25 | 19.50 |
| 18 | 2.50 | 23.00 |
| 21 | 2.75 | 26.50 |
| 24 | 3.00 | 30.00 |
| 27 | 3.25 | 33.50 |
| 30 | 3.50 | 37.00 |
| 33 | 3.75 | 40.50 |
| 36 | 4.00 | 44.00 |
| 42 | 4.50 | 51.00 |
| 48 | 5.00 | 58.00 |
| 54 | 5.50 | 66.50 |
| 60 | 6.00 | 73.50 |
| 66 | 6.50 | 80.50 |

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

NOTE: CONTRACTOR MUST COORDINATE WORK WITH UTILITY COMPANY AND CITY PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR ALL MATERIALS, LABOR, REPAIRS, ETC. TO COMPLETE WORK AND RESTORE AREA TO SAME STATE PRIOR TO STARTING WORK.

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## BASIS OF BEARING

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

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STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
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| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

STORM DRAIN PLAN

VR239 & PPR2336

C4.1

## BASIS OF BEARING

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

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## SITE LEGEND

- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR — FLOODPLAIN BOUNDARY
- X — EXISTING FENCE
- X X X X — PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

## UTILITY LEGEND

- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- SS — EXISTING SANITARY SEWER
- SS — PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- G — EXISTING GAS LINE
- G — PROPOSED GAS LINE
- UT — EXISTING UNDERGROUND TELEPHONE
- OHE — EXISTING OVERHEAD ELECTRIC
- FO — EXISTING FIBER OPTIC LINE
- FO OWF — EXISTING FIBER OPTIC STRUCTURES
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE

CALCULATIONS TO TOP OF PIPE (TOP) FOR REINFORCED CONCRETE PIPE (RCP) ASSUMES WALL THICKNESS AS SHOWN BELOW:

| PIPE I.D. (INCHES) | WALL THICKNESS (INCHES) | PIPE O.D. (INCHES) |
|---|---|---|
| 12 | 2.00 | 16.00 |
| 15 | 2.25 | 19.50 |
| 18 | 2.50 | 23.00 |
| 21 | 2.75 | 26.50 |
| 24 | 3.00 | 30.00 |
| 27 | 3.25 | 33.50 |
| 30 | 3.50 | 37.00 |
| 33 | 3.75 | 40.50 |
| 36 | 4.00 | 44.00 |
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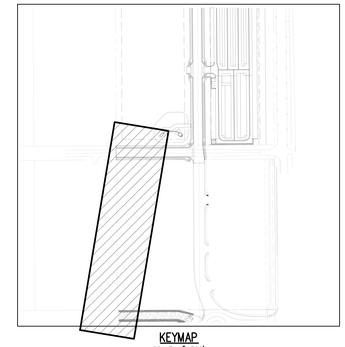
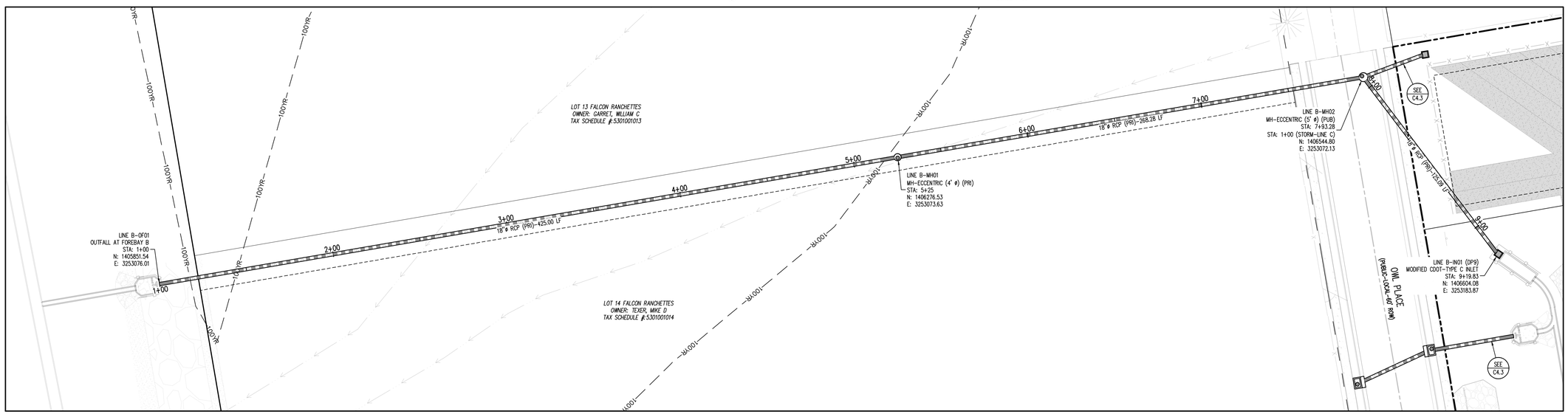


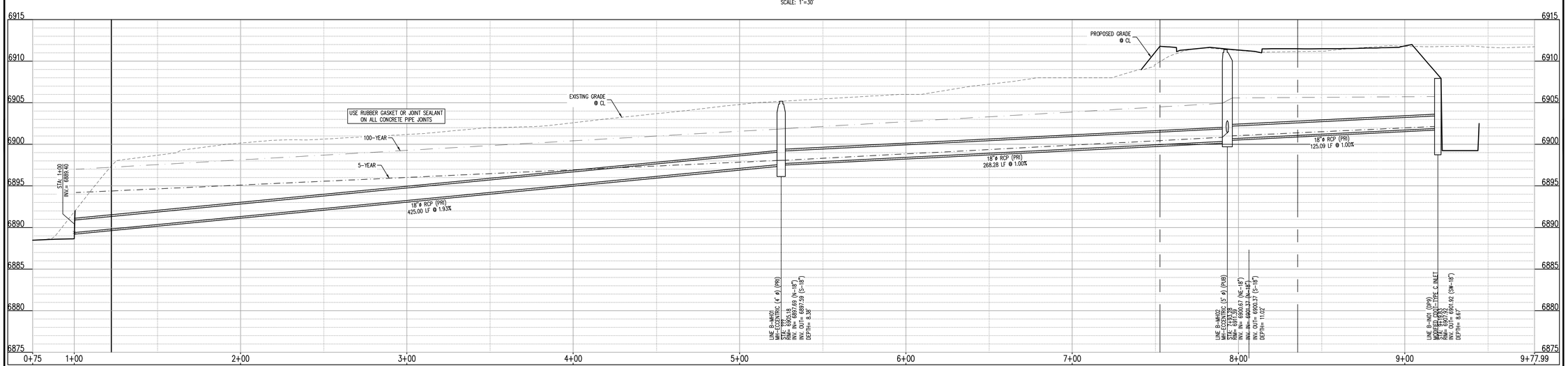
KEYMAP
SCALE: 1"=300'

N

0 15 30
SCALE: 1"=30'




STORM DRAIN PLAN – LINE B
SCALE: 1"=30'




STORM DRAIN PROFILE – LINE B (STA: 1+00 – 9+77.99)
SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'


Galloway
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| Project No: | MRS01 |
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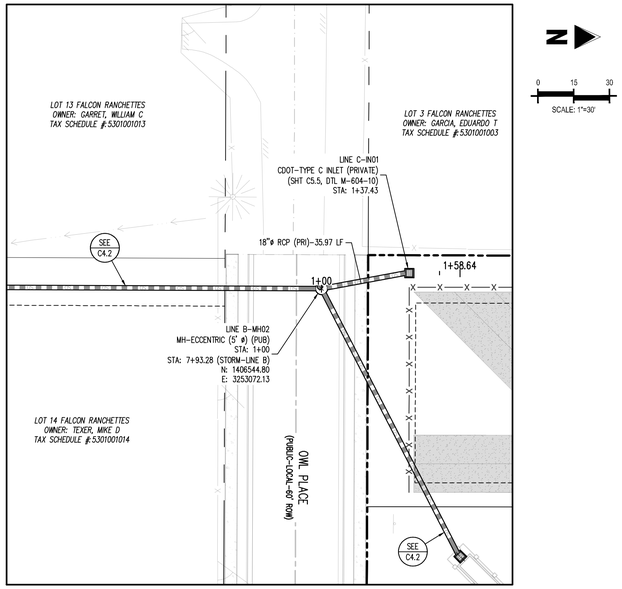
| Date: | 05/06/2024 |

STORM DRAIN PLAN

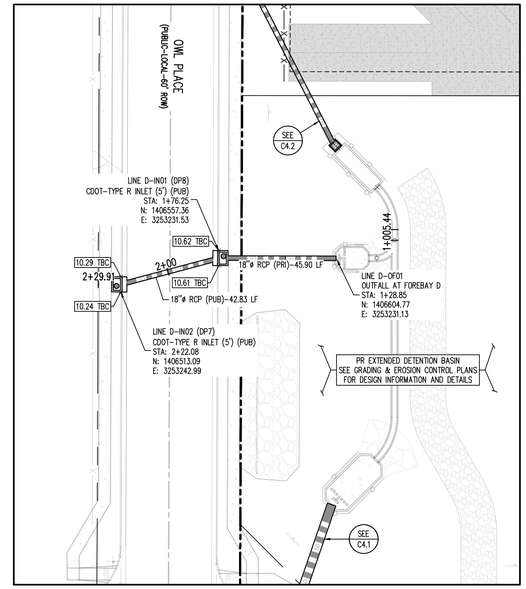
VR239 & PPR2336

C4.2
Sheet 14 of 25



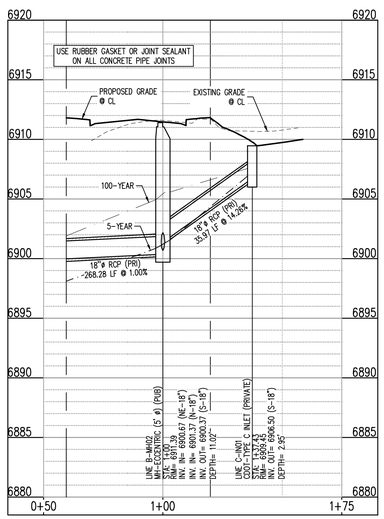

STORM DRAIN PLAN – LINE C

SCALE: 1"=30'



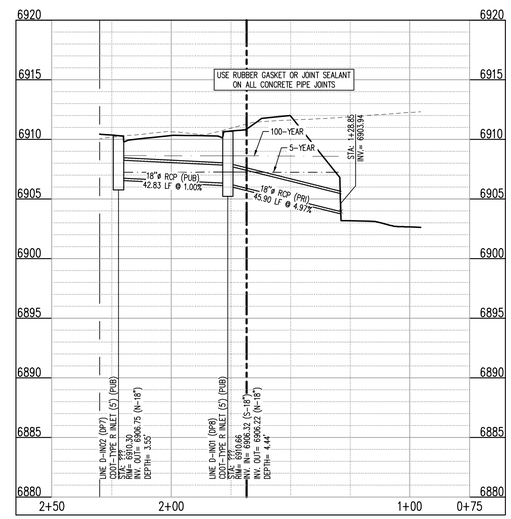

STORM DRAIN PLAN – LINE D

SCALE: 1"=30'



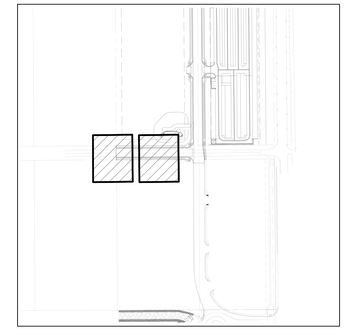

STORM DRAIN PROFILE – LINE C (STA: 0+50 – 1+75)

SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'




STORM DRAIN PROFILE – LINE D (STA: 0+75 – 2+50)

SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'



KEYMAP

SCALE: 1"=300'

## SITE LEGEND

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- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

CALCULATIONS TO TOP OF PIPE (TOP) FOR REINFORCED CONCRETE PIPE (RCP) ASSUMES WALL THICKNESS AS SHOWN BELOW:

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## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4,
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STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

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1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.

Know what's below. Call before you dig.

2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.


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05/21/2024


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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

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| Checked By: | BAS, CMWJ |
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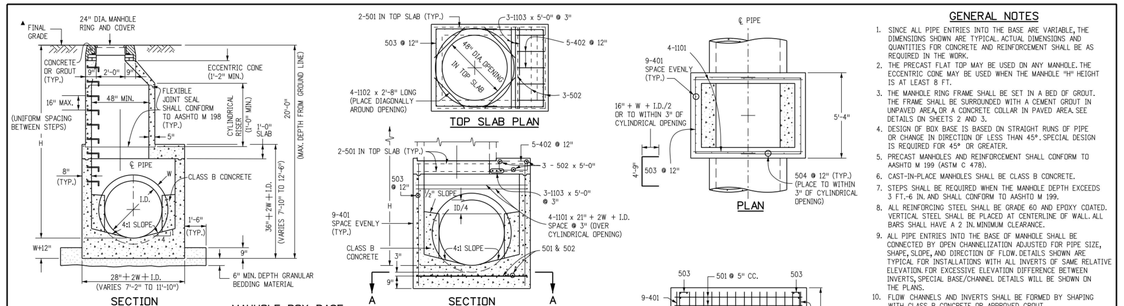
STORM DRAIN PLAN

VR239 & PPR2336

C4.3

Sheet 15 of 25

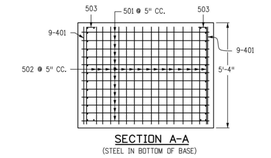



MAHHOLE BOX BASE

## GENERAL NOTES

1. SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
2. THE PRECAST FLAT TOP MAY BE USED ON ANY MANHOLE. THE ECCENTRIC CONE MAY BE USED WHEN THE MANHOLE "H" HEIGHT IS AT LEAST 8 FT.
3. THE MANHOLE RING FRAME SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A CEMENT GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA. SEE DETAILS ON SHEETS 2 AND 3.
4. DESIGN OF BOX BASE IS BASED ON STRAIGHT RUNS OF PIPE OR CHANGE IN DIRECTION OF LESS THAN 45°. SPECIAL DESIGN IS REQUIRED FOR 45° OR GREATER.
5. PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO AASHTO M 199 (ASTM C 478).
6. CAST-IN-PLACE MANHOLES SHALL BE CLASS B CONCRETE.
7. STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3 FT.-6 IN. AND SHALL CONFORM TO AASHTO M 199.
8. ALL REINFORCING STEEL SHALL BE GRADE 60 AND EPOXY COATED. VERTICAL STEEL SHALL BE PLACED AT CENTERLINE OF WALL. ALL BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.
9. ALL PIPE ENTRIES INTO THE BASE OF MANHOLE SHALL BE CONNECTED BY OPEN CHANNELIZATION ADJUSTED FOR PIPE SIZE, SHAPE, SLOPE, AND DIRECTION OF FLOW. DETAILS SHOWN ARE TYPICAL FOR INSTALLATIONS WITH ALL INVERTS OF SAME RELATIVE ELEVATION. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, SPECIAL BASE/CHANNEL DETAILS WILL BE SHOWN ON THE PLANS.
10. FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
11. STUB-OUTS SHALL EXTEND 2 FT. MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
12. THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.

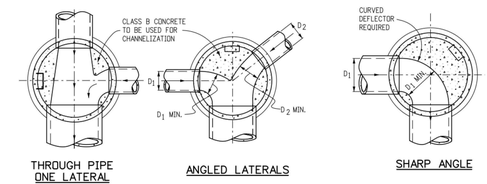
▲ WHEN FINAL GRADE IS PAVEMENT SURFACE, RECESS MANHOLE RING AND COVER ¼" MIN. TO ½" MAX.




SECTION A-A
(STEEL IN BOTTOM OF BASE)

| MARK | SIZE | TYPE | WT. #/FT. | BARS | I.D. 54" | 60" | 66" | 72" | 84" | 96" | FORMULAS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 401 | 4 | I | 0.668 | (NO. REQ'D. -(LENGTH WEIGHT * | 18 8'-1" 97.2 | 18 8'-8" 104.2 | 18 9'-3" 111.2 | 18 9'-10" 118.2 | 18 11'-0" 132.3 | 18 12'-2" 146.3 | 401 BAR LENGTH = 32" + 2W + I.D. |
| 402 | 4 | III | 0.668 | (NO. REQ'D. -(LENGTH WEIGHT * | 5 5'-5" 18.1 | 5 6'-0" 20.0 | 5 6'-7" 22.0 | 5 7'-2" 23.9 | 5 8'-4" 27.8 | 5 9'-6" 31.7 | 402 BAR LENGTH = I.D. + 2W |
| 501 | 5 | I | 1.043 | (NO. REQ'D. -(LENGTH WEIGHT * | 17 7'-5" 131.5 | 17 8'-0" 141.8 | 17 8'-7" 152.2 | 17 9'-2" 162.5 | 17 10'-4" 183.2 | 17 11'-6" 203.9 | 501 BAR LENGTH = 24" + I.D. + 2W |
| 502 | 5 | I | 1.043 | (NO. REQ'D. -(LENGTH WEIGHT * | 22 5'-0" 114.7 | 23 5'-0" 119.9 | 25 5'-0" 130.4 | 26 5'-0" 135.6 | 29 5'-0" 151.2 | 32 5'-0" 166.9 | 502 NUMBER BARS REQ'D. = 3 + ( (24+I.D.+2W)/@ 5" +1 ) |
| 503 | 5 | II | 1.043 | (NO. REQ'D. -(LENGTH WEIGHT * | 16 12'-10" 214.2 | 16 13'-5" 223.9 | 18 14'-0" 262.6 | 18 14'-7" 273.8 | 20 15'-9" 328.5 | 24 16'-11" 423.5 | 503 NUMBER BARS REQ'D. = 2 ( (13+I.D.+2W)/@ 12" +1 ) BAR LENGTH = 4'-9"+2(56+W+I.D./2) |
| 504 | 5 | I | 1.043 | (NO. REQ'D. -(LENGTH WEIGHT * | 12 8'-1" 101.2 | 14 8'-8" 126.6 | 14 9'-3" 135.1 | 16 9'-10" 164.1 | 18 11'-0" 206.5 | 20 12'-2" 253.8 | 504 NUMBER BARS REQ'D. = 2 ( (2W+I.D.-4)/@ 12" +1 ) BAR LENGTH = 32"+2W+I.D. |
| 1101 | 11 | I | 5.313 | (NO. REQ'D. -(LENGTH WEIGHT * | 4 7'-2" 152.3 | 4 7'-9" 164.7 | 4 8'-4" 177.1 | 4 8'-11" 189.5 | 4 10'-1" 214.3 | 4 11'-3" 239.1 | 1101 BAR LENGTH = 21" + I.D. + 2W |
| 1102 | 11 | I | 5.313 | (NO. REQ'D. -(LENGTH WEIGHT * | 4 2'-8" 56.7 | 4 2'-8" 56.7 | 4 2'-8" 56.7 | 4 2'-8" 56.7 | 4 2'-8" 56.7 | 4 2'-8" 56.7 | BENDING TYPE I STRAIGHT |
| 1103 | 11 | I | 5.313 | (NO. REQ'D. -(LENGTH WEIGHT * | 3 5'-0" 79.7 | 3 5'-0" 79.7 | 3 5'-0" 79.7 | 3 5'-0" 79.7 | 3 5'-0" 79.7 | 3 5'-0" 79.7 | TYPE II 4'-9" 16"+W+I.D./2 |
| * REINFORCING STEEL TOTAL | | | | | 965.6 | 1,037.5 | 1,127.2 | 1,204.0 | 1,380.2 | 1,601.6 | TYPE III 12" 12" 7" I.D.+2W-38" |
| CONCRETE - CUBIC YARDS - TOTAL | | | | | 6.0 | 6.6 | 7.3 | 8.0 | 9.5 | 11.1 | |
| NOTE: QUANTITIES ARE BASED ON SAME SIZE PIPE ENTRANCE TO AND EXIT FROM, BASE AND A 4 FT. MANHOLE ENTRANCE INTO TOP SLAB OF BASE. | | | | | | | | | | | |

QUANTITIES FOR CONCRETE MANHOLE BOX BASE




TYPICAL CHANNELIZATION DETAILS

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MANHOLES

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STANDARD PLAN NO.
M-604-20
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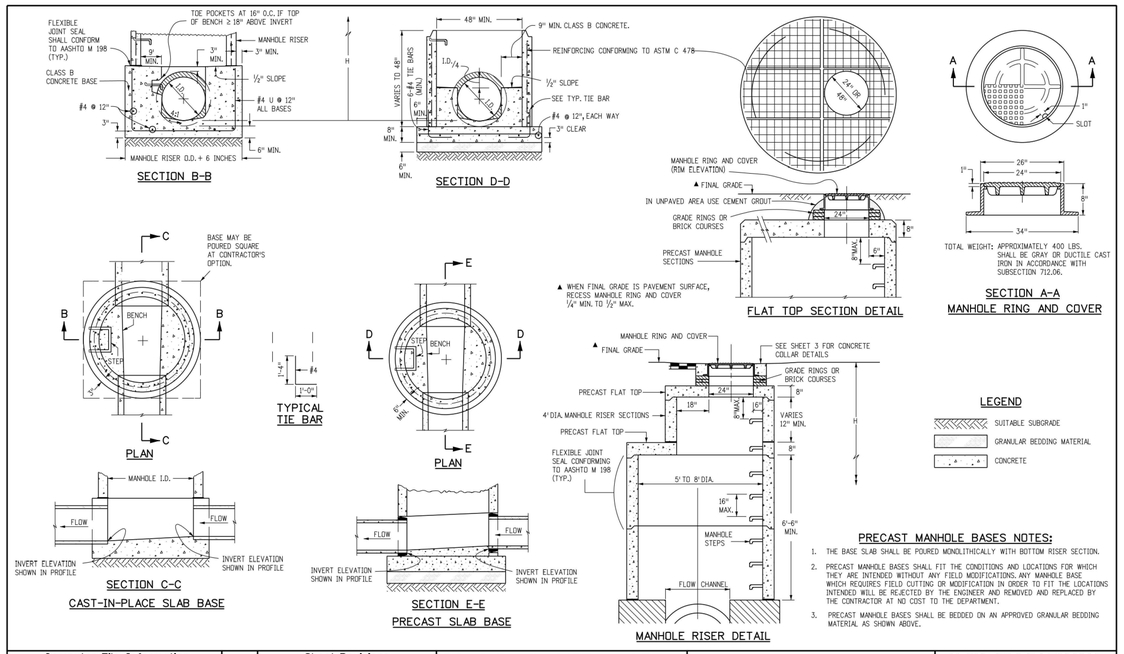
Project Sheet Number:




## PRECAST MANHOLE BASES NOTES:

1. THE BASE SLAB SHALL BE POURED MONOLITHICALLY WITH BOTTOM RISER SECTION.
2. PRECAST MANHOLE BASES SHALL FIT THE CONDITIONS AND LOCATIONS FOR WHICH THEY ARE INTENDED WITHOUT ANY FIELD MODIFICATIONS. ANY MANHOLE BASE WHICH REQUIRES FIELD CUTTING OR MODIFICATION IN ORDER TO FIT THE LOCATIONS INTENDED WILL BE REJECTED BY THE ENGINEER AND REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT.
3. PRECAST MANHOLE BASES SHALL BE BEDDED ON AN APPROVED GRANULAR BEDDING MATERIAL AS SHOWN ABOVE.

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MANHOLES

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M-604-20
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Project Sheet Number:


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MERIDIAN STORAGE, LLC
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STORM DRAIN DETAILS

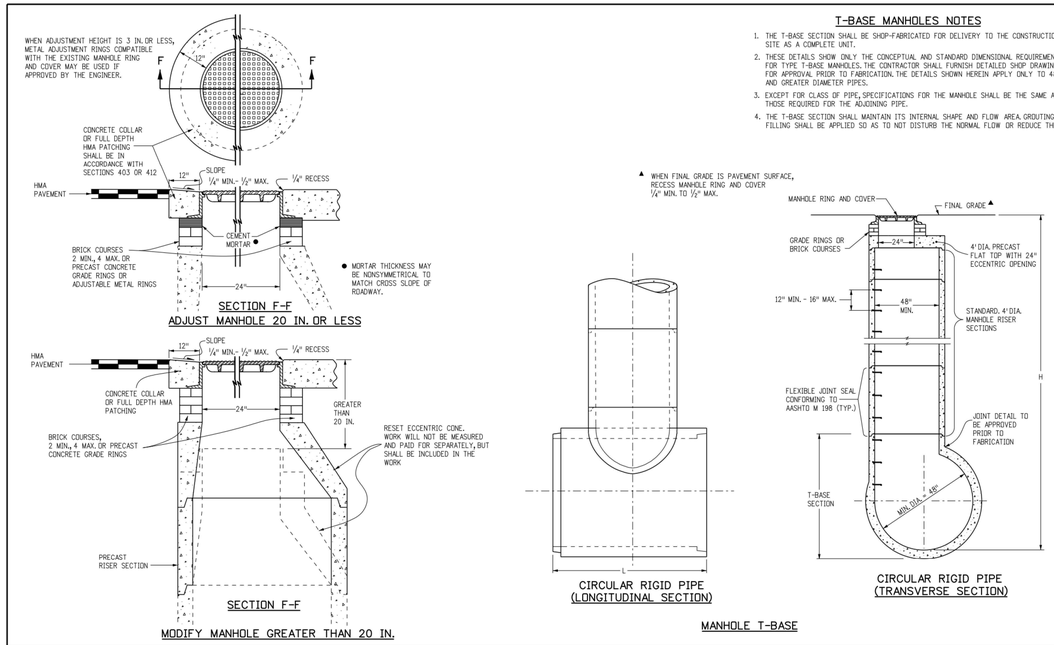
VR239 & PPR2336

C5.1

Sheet 16 of 25

## T-BASE MANHOLES NOTES

1. THE T-BASE SECTION SHALL BE SHOP-FABRICATED FOR DELIVERY TO THE CONSTRUCTION SITE AS A COMPLETE UNIT.
2. THESE DETAILS SHOW ONLY THE CONCEPTUAL AND STANDARD DIMENSIONAL REQUIREMENTS FOR TYPE T-BASE MANHOLES. THE CONTRACTOR SHALL FURNISH DETAILED SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. THE DETAILS SHOWN HEREIN APPLY ONLY TO 48 IN. AND GREATER DIAMETER PIPES.
3. EXCEPT FOR CLASS OF PIPE, SPECIFICATIONS FOR THE MANHOLE SHALL BE THE SAME AS THOSE REQUIRED FOR THE ADJOINING PIPE.
4. THE T-BASE SECTION SHALL MAINTAIN ITS INTERNAL SHAPE AND FLOW AREA. GROUTING OR FILLING SHALL BE APPLIED SO AS TO NOT DISTURB THE NORMAL FLOW OR REDUCE THE AREA.

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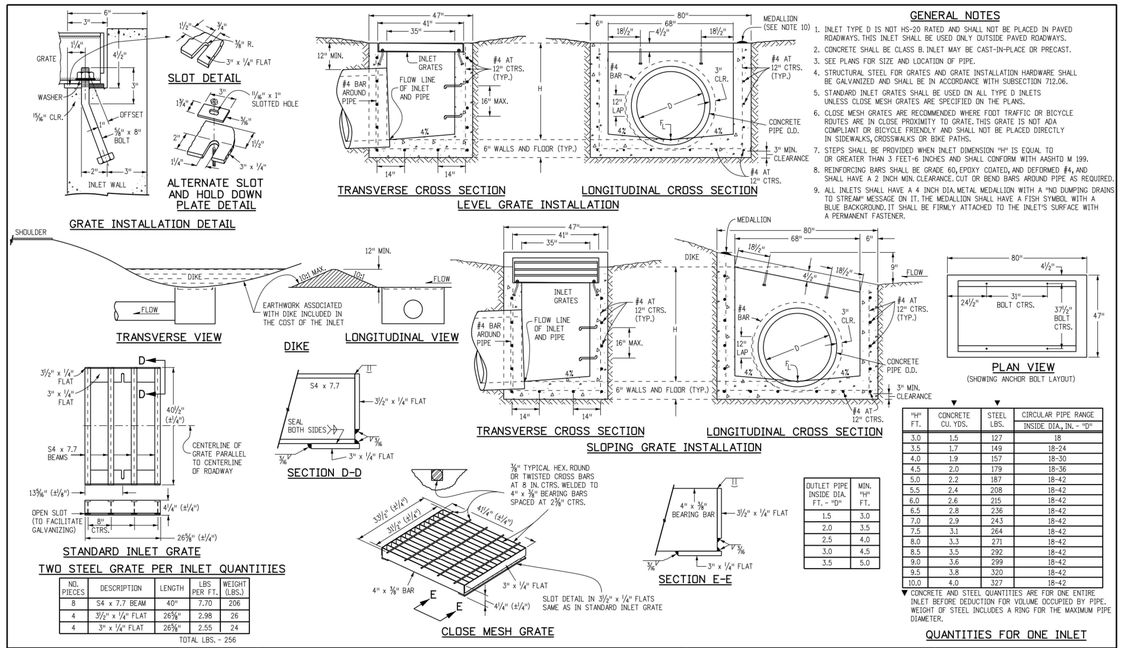
# MANHOLES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-604-20
Standard Sheet No. 3 of 3
Project Sheet Number:

## GENERAL NOTES

1. INLET TYPE D IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. SEE PLANS FOR SIZE AND LOCATION OF PIPE.
4. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
5. STANDARD INLET GRATES SHALL BE USED ON ALL TYPE D INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
6. CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
7. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET-6 INCHES AND SHALL CONFORM WITH AASHTO M 199.
8. REINFORCING BARS SHALL BE GRADE 60, EPOXY COATED, AND DEFORMED #4, AND SHALL HAVE A 2 INCH MIN. CLEARANCE. CUT OR BEND BARS AROUND PIPE AS REQUIRED.
9. ALL INLETS SHALL HAVE A 4 INCH DIA. METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE INLET'S SURFACE WITH A PERMANENT FASTENER.




| NO. PIECES | DESCRIPTION | LENGTH | LBS PER FT. | WEIGHT (LBS.) |
|---|---|---|---|---|
| 8 | S4 x 7.7 BEAM | 40" | 7.70 | 206 |
| 4 | 3½" x ¼" FLAT | 26⅝" | 2.98 | 26 |
| 4 | 3" x ¼" FLAT | 26⅝" | 2.55 | 24 |
| TOTAL LBS. - 256 | | | | |

TWO STEEL GRATE PER INLET QUANTITIES

| OUTLET PIPE INSIDE DIA. FT. - "D" | MIN. "H" FT. |
|---|---|
| 1.5 | 3.0 |
| 2.0 | 3.5 |
| 2.5 | 4.0 |
| 3.0 | 4.5 |
| 3.5 | 5.0 |

| "H" FT. | CONCRETE CU. YDS. | STEEL LBS. | CIRCULAR PIPE RANGE INSIDE DIA., IN. = "D" |
|---|---|---|---|
| 3.0 | 1.5 | 127 | 18 |
| 3.5 | 1.7 | 149 | 18-24 |
| 4.0 | 1.9 | 157 | 18-30 |
| 4.5 | 2.0 | 179 | 18-36 |
| 5.0 | 2.2 | 187 | 18-42 |
| 5.5 | 2.4 | 208 | 18-42 |
| 6.0 | 2.6 | 215 | 18-42 |
| 6.5 | 2.8 | 236 | 18-42 |
| 7.0 | 2.9 | 243 | 18-42 |
| 7.5 | 3.1 | 264 | 18-42 |
| 8.0 | 3.3 | 271 | 18-42 |
| 8.5 | 3.5 | 292 | 18-42 |
| 9.0 | 3.6 | 299 | 18-42 |
| 9.5 | 3.8 | 320 | 18-42 |
| 10.0 | 4.0 | 327 | 18-42 |

▼ CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

QUANTITIES FOR ONE INLET

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# INLET, TYPE D

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M-604-11
Standard Sheet No. 1 of 1
Project Sheet Number:


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| Checked By: | BAS, CMWJ |
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STORM DRAIN DETAILS

VR239 & PPR2336

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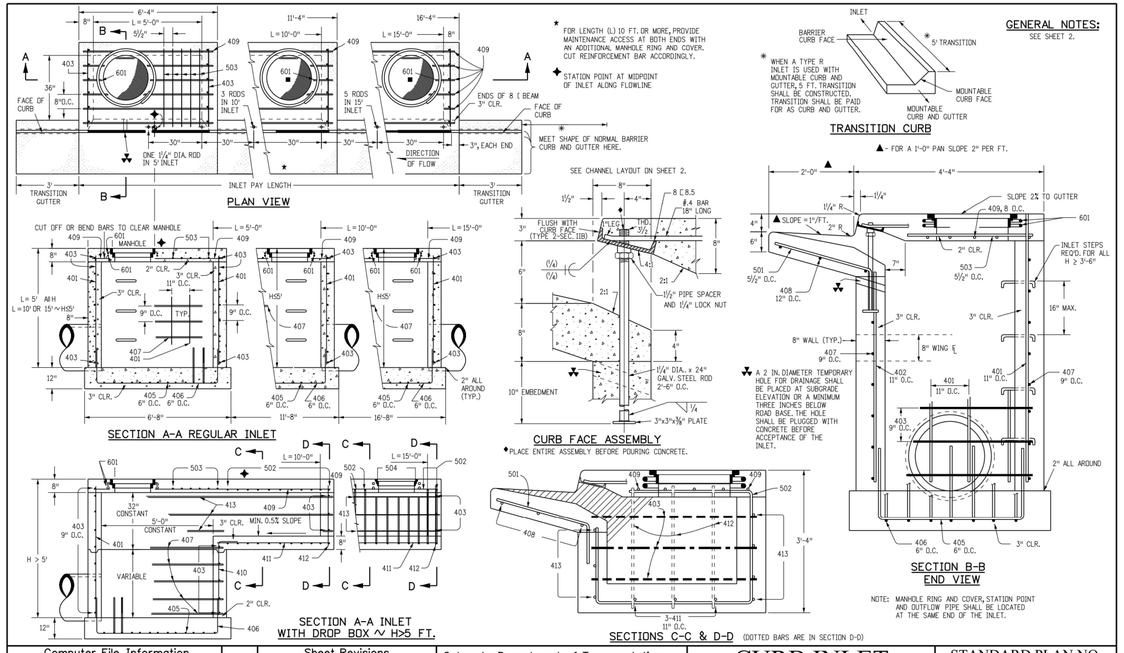
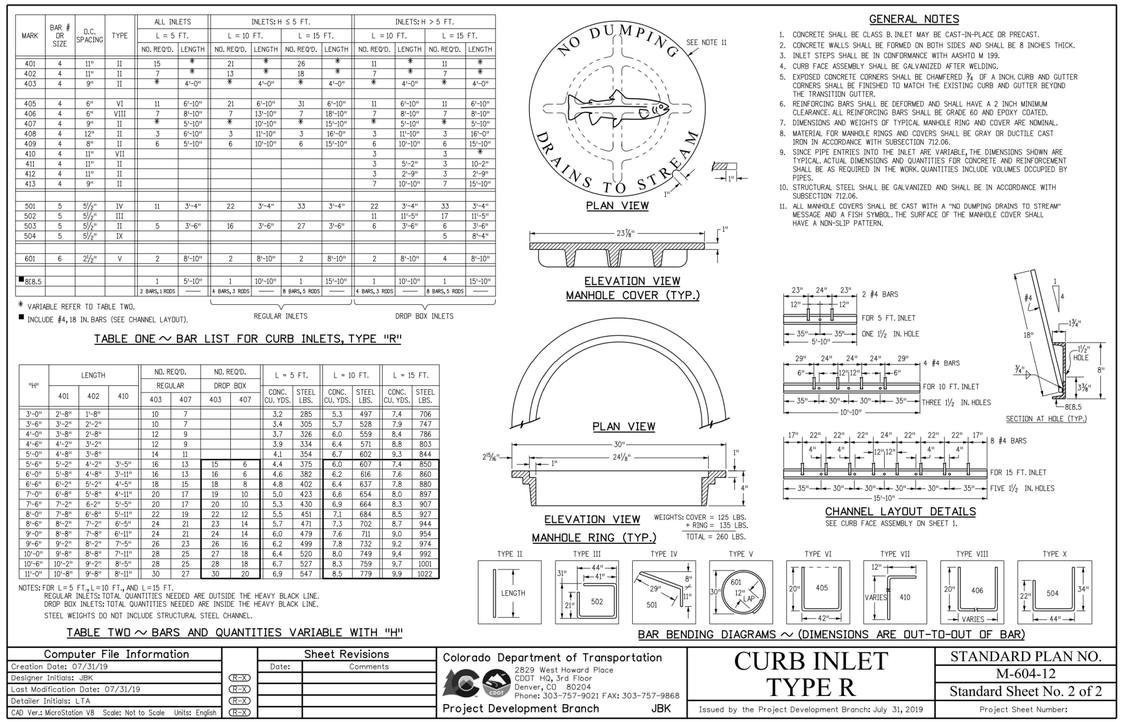
Sheet 17 of 25




| MARK | BAR # OR SIZE | O.C. SPACING | TYPE | ALL INLETS L = 5 FT. NO. REQ'D. | ALL INLETS L = 5 FT. LENGTH | INLETS: H ≤ 5 FT. L = 10 FT. NO. REQ'D. | INLETS: H ≤ 5 FT. L = 10 FT. LENGTH | INLETS: H ≤ 5 FT. L = 15 FT. NO. REQ'D. | INLETS: H ≤ 5 FT. L = 15 FT. LENGTH | INLETS: H > 5 FT. L = 10 FT. NO. REQ'D. | INLETS: H > 5 FT. L = 10 FT. LENGTH | INLETS: H > 5 FT. L = 15 FT. NO. REQ'D. | INLETS: H > 5 FT. L = 15 FT. LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 401 | 4 | 11" | II | 15 | * | 21 | * | 26 | * | 11 | * | 11 | * |
| 402 | 4 | 11" | II | 7 | * | 13 | * | 18 | * | 7 | * | 7 | * |
| 403 | 4 | 9" | II | * | 4'-0" | * | 4'-0" | * | 4'-0" | * | 4'-0" | * | 4'-0" |
| 405 | 4 | 6" | VI | 11 | 6'-10" | 21 | 6'-10" | 31 | 6'-10" | 11 | 6'-10" | 11 | 6'-10" |
| 406 | 4 | 6" | VIII | 7 | 8'-10" | 7 | 13'-10" | 7 | 18'-10" | 7 | 8'-10" | 7 | 8'-10" |
| 407 | 4 | 9" | II | * | 5'-10" | * | 10'-10" | * | 15'-10" | * | 5'-10" | * | 5'-10" |
| 408 | 4 | 12" | II | 3 | 6'-10" | 3 | 11'-10" | 3 | 16'-0" | 3 | 11'-10" | 3 | 16'-0" |
| 409 | 4 | 8" | II | 6 | 5'-10" | 6 | 10'-10" | 6 | 15'-10" | 6 | 10'-10" | 6 | 15'-10" |
| 410 | 4 | 11" | VII | | | | | | | 3 | | 3 | * |
| 411 | 4 | 11" | II | | | | | | | 3 | 5'-2" | 3 | 10'-2" |
| 412 | 4 | 11" | II | | | | | | | 3 | 2'-9" | 3 | 2'-9" |
| 413 | 4 | 9" | II | | | | | | | 7 | 10'-10" | 7 | 15'-10" |
| 501 | 5 | 5½" | IV | 11 | 3'-4" | 22 | 3'-4" | 33 | 3'-4" | 22 | 3'-4" | 33 | 3'-4" |
| 502 | 5 | 5½" | III | | | | | | | 11 | 11'-5" | 17 | 11'-5" |
| 503 | 5 | 5½" | II | 5 | 3'-6" | 16 | 3'-6" | 27 | 3'-6" | 6 | 3'-6" | 6 | 3'-6" |
| 504 | 5 | 5½" | IX | | | | | | | | | 5 | 8'-4" |
| 601 | 6 | 2⅞" | V | 2 | 8'-10" | 2 | 8'-10" | 2 | 8'-10" | 2 | 8'-10" | 4 | 8'-10" |
| ■ 8(8.5 | | | | 1 | 5'-10" | 1 | 10'-10" | 1 | 15'-10" | 1 | 10'-10" | 1 | 15'-10" |
| | | | | 2 BARS, 1 RODS | —— | 4 BARS, 3 RODS | —— | 8 BARS, 5 RODS | —— | 4 BARS, 3 RODS | —— | 8 BARS, 5 RODS | —— |
| | | | | | | REGULAR INLETS | | | | DROP BOX INLETS | | | |

* VARIABLE REFER TO TABLE TWO.
■ INCLUDE #4, 18 IN. BARS (SEE CHANNEL LAYOUT).

TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

| "H" | LENGTH 401 | LENGTH 402 | LENGTH 410 | NO. REQ'D. REGULAR 403 | NO. REQ'D. REGULAR 407 | NO. REQ'D. DROP BOX 403 | NO. REQ'D. DROP BOX 407 | L = 5 FT. CONC. CU. YDS. | L = 5 FT. STEEL LBS. | L = 10 FT. CONC. CU. YDS. | L = 10 FT. STEEL LBS. | L = 15 FT. CONC. CU. YDS. | L = 15 FT. STEEL LBS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3'-0" | 2'-8" | 1'-8" | | 10 | 7 | | | 3.2 | 285 | 5.3 | 497 | 7.4 | 706 |
| 3'-6" | 3'-2" | 2'-2" | | 10 | 7 | | | 3.4 | 305 | 5.7 | 528 | 7.9 | 747 |
| 4'-0" | 3'-8" | 2'-8" | | 12 | 9 | | | 3.7 | 326 | 6.0 | 559 | 8.4 | 786 |
| 4'-6" | 4'-2" | 3'-2" | | 12 | 9 | | | 3.9 | 334 | 6.4 | 571 | 8.8 | 803 |
| 5'-0" | 4'-8" | 3'-8" | | 14 | 11 | | | 4.1 | 354 | 6.7 | 602 | 9.3 | 844 |
| 5'-6" | 5'-2" | 4'-2" | 3'-5" | 16 | 13 | 15 | 6 | 4.4 | 375 | 6.0 | 607 | 7.4 | 850 |
| 6'-0" | 5'-8" | 4'-8" | 3'-11" | 16 | 13 | 16 | 6 | 4.6 | 382 | 6.2 | 616 | 7.6 | 860 |
| 6'-6" | 6'-2" | 5'-2" | 4'-5" | 18 | 15 | 18 | 8 | 4.8 | 402 | 6.4 | 637 | 7.8 | 880 |
| 7'-0" | 6'-8" | 5'-8" | 4'-11" | 20 | 17 | 19 | 10 | 5.0 | 423 | 6.6 | 654 | 8.0 | 897 |
| 7'-6" | 7'-2" | 6'-2" | 5'-5" | 20 | 17 | 20 | 10 | 5.3 | 430 | 6.9 | 664 | 8.3 | 907 |
| 8'-0" | 7'-8" | 6'-8" | 5'-11" | 22 | 19 | 22 | 12 | 5.5 | 451 | 7.1 | 684 | 8.5 | 927 |
| 8'-6" | 8'-2" | 7'-2" | 6'-5" | 24 | 21 | 23 | 14 | 5.7 | 471 | 7.3 | 702 | 8.7 | 944 |
| 9'-0" | 8'-8" | 7'-8" | 6'-11" | 24 | 21 | 24 | 14 | 6.0 | 479 | 7.6 | 711 | 9.0 | 954 |
| 9'-6" | 9'-2" | 8'-2" | 7'-5" | 26 | 23 | 26 | 16 | 6.2 | 499 | 7.8 | 732 | 9.2 | 974 |
| 10'-0" | 9'-8" | 8'-8" | 7'-11" | 28 | 25 | 27 | 18 | 6.4 | 520 | 8.0 | 749 | 9.4 | 992 |
| 10'-6" | 10'-2" | 9'-2" | 8'-5" | 28 | 25 | 28 | 18 | 6.7 | 527 | 8.3 | 759 | 9.7 | 1001 |
| 11'-0" | 10'-8" | 9'-8" | 8'-11" | 30 | 27 | 30 | 20 | 6.9 | 547 | 8.5 | 779 | 9.9 | 1022 |

NOTES: FOR L = 5 FT., L = 10 FT., AND L = 15 FT.
REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

## GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 INCHES THICK.
3. INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ OF A INCH. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
6. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 INCH MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE GRADE 60 AND EPOXY COATED.
7. DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
8. MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06.
9. SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
10. STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
11. ALL MANHOLE COVERS SHALL BE CAST WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE AND A FISH SYMBOL. THE SURFACE OF THE MANHOLE COVER SHALL HAVE A NON-SLIP PATTERN.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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

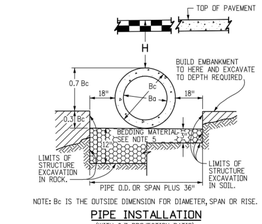
| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

STORM DRAIN DETAILS

VR239 & PPR2336

C5.3




NOTE: Bc IS THE OUTSIDE DIMENSION FOR DIAMETER, SPAN OR RISE.

## PIPE INSTALLATION
(WITH 0.7 PROJECTION RATIO)

| CIRCULAR (CIR) △ PIPE SIZE - Bo (INSIDE DIA) | WALL THICKNESS | 0.3 Bc (OUTSIDE DIA) | VERTICAL ELLIPTICAL (VE) SPAN | RISE | WALL THICKNESS | 0.3 OUTSIDE RISE | HORIZONTAL ELLIPTICAL (HE) SPAN | RISE | WALL THICKNESS | 0.3 OUTSIDE RISE |
|---|---|---|---|---|---|---|---|---|---|---|
| IN. | | FT. | IN. | | | FT. | IN. | | | FT. |
| 12 | 2 | 0.40 | | | | | | | | |
| 15 | 2-1/4 | 0.49 | | | | | | | | |
| 18 | 2-1/2 | 0.58 | | | | | | | | |
| 21 | 2-3/4 | 0.66 | | | | | 23 | 14 | 2-3/4 | 0.49 |
| 24 | 3 | 0.75 | | | | | 30 | 19 | 3-1/4 | 0.66 |
| 27 | 3-1/4 | 0.84 | | | | | 34 | 22 | 3-1/2 | 0.73 |
| 30 | 3-1/2 | 0.92 | | | | | 38 | 24 | 3-3/4 | 0.79 |
| 33 | 3-3/4 | 1.01 | | | | | | | | |
| 36 | 4 | 1.10 | 29 | 45 | 4-1/2 | 1.35 | 45 | 29 | 4-1/2 | 0.95 |
| 42 | 4-1/2 | 1.28 | 34 | 53 | 5 | 1.58 | 53 | 34 | 5 | 1.10 |
| 48 | 5 | 1.45 | 38 | 60 | 5-1/2 | 1.78 | 60 | 38 | 5-1/2 | 1.23 |
| 54 | 5-1/2 | 1.62 | 43 | 68 | 6 | 2.00 | 68 | 43 | 6 | 1.38 |
| 60 | 6 | 1.80 | 48 | 76 | 6-1/2 | 2.23 | 76 | 48 | 6-1/2 | 1.53 |
| 66 | 6-1/2 | 1.97 | 53 | 83 | 7 | 2.43 | 83 | 53 | 7 | 1.68 |
| 72 | 7 | 2.15 | 58 | 91 | 7-1/2 | 2.65 | 91 | 58 | 7-1/2 | 1.83 |
| 78 | 7-1/2 | 2.32 | 63 | 98 | 8 | 2.85 | 98 | 63 | 8 | 1.98 |
| 84 | 8 | 2.50 | 68 | 106 | 8-1/2 | 3.08 | 106 | 68 | 8-1/2 | 2.13 |
| 90 | 8-1/2 | 2.68 | 72 | 113 | 9 | 3.28 | 113 | 72 | 9 | 2.25 |
| 96 | 9 | 2.85 | 77 | 121 | 9-1/2 | 3.50 | 121 | 77 | 9-1/2 | 2.40 |
| 102 | 9-1/2 | 3.02 | 82 | 128 | 9-3/4 | 3.69 | 128 | 82 | 9-3/4 | 2.54 |
| 108 | 10 | 3.20 | 87 | 136 | 10 | 3.90 | 136 | 87 | 10 | 2.68 |

△ ALSO EQUIVALENT ROUND DIMENSION FOR ELLIPTICAL PIPE.

## DIMENSIONS FOR REINFORCED CONCRETE PIPE
(FOR INFORMATION ONLY)

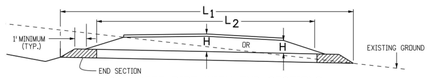
## GENERAL NOTES

### REINFORCED CONCRETE PIPE

1. FILL HEIGHTS GREATER THAN MAXIMUM ALLOWED IN THE HEIGHTS OF FILL TABLE ON THIS SHEET REQUIRE SPECIAL DESIGN OF STRUCTURE.
2. PIPE DESIGN IS BASED ON SAFETY FACTOR OF 1.33 ON ULTIMATE STRENGTH.
3. THE HEIGHTS OF FILL OVER TOP OF PIPE ARE BASED ON UNIT WEIGHT OF SOIL AT 135 LBS. PER CUBIC FT.
4. PIPE CLASS IS DETERMINED FROM 0.01 IN. CRACK D-LOAD.
5. BEDDING IS CLASS B (MODIFIED) (FROM CONCRETE PIPE DESIGN MANUAL-AMERICAN CONCRETE PIPE ASSOCIATION) WITH SETTLEMENT RATIO R = 0.0 (YIELDING BED). BEDDING MATERIAL FOR RIGID PIPE IN SOIL SHALL BE 3 IN. LOOSE THICKNESS STRUCTURE BACKFILL CLASS 2. BEDDING MATERIAL FOR RIGID PIPE IN ROCK SHALL BE 12 IN. LOOSE THICKNESS STRUCTURE BACKFILL CLASS 1.
6. CHANGES IN DESIGN FACTORS REQUIRE COMPENSATING CHANGES IN PIPE DESIGN.
7. MINIMUM WALL THICKNESS DIMENSIONS ARE BASED ON AASHTO M 170 (WALL B) FOR CIRCULAR PIPE, AND AASHTO M 207 FOR ELLIPTICAL PIPE.
8. SPACING FOR MULTIPLE PIPE INSTALLATIONS SHALL CONFORM TO THE DETAILS SHOWN ON STANDARD PLAN M-206-1.
9. WHEN A PIPE IS TO BE EXTENDED, THE SAME PIPE MATERIAL AND SIZE AS IN THE ORIGINAL PIPE INSTALLATION SHALL BE USED.

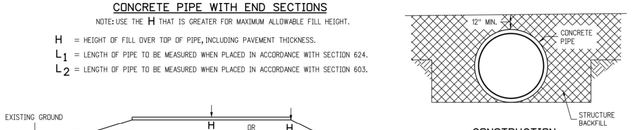
### NONREINFORCED CONCRETE PIPE

1. AT THE OPTION OF THE CONTRACTOR, NONREINFORCED CONCRETE PIPE CONFORMING TO AASHTO M 86 MAY BE USED IN LIEU OF REINFORCED CONCRETE PIPE FOR ALL SIZES 36 INCHES IN DIAMETER AND SMALLER. THE NONREINFORCED CONCRETE PIPE SHALL MEET THE SAME D-LOAD TO PRODUCE THE ULTIMATE LOAD UNDER THE THREE-EDGE BEARING METHOD AS SPECIFIED FOR REINFORCED CONCRETE PIPE IN CONFORMANCE WITH AASHTO M 170. THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION OF CONFORMACE. THE WALL THICKNESS OF THE NONREINFORCED PIPE MAY BE INCREASED AS REQUIRED TO MEET D-LOAD REQUIREMENT.
2. ALL REQUIREMENTS FOR REINFORCED CONCRETE PIPE, EXCEPT THOSE REFERRING TO REINFORCEMENT, SHALL APPLY TO NONREINFORCED CONCRETE PIPE.

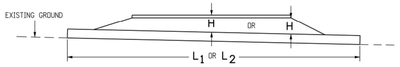



## CONCRETE PIPE WITH END SECTIONS
NOTE: USE THE H THAT IS GREATER FOR MAXIMUM ALLOWABLE FILL HEIGHT.

H = HEIGHT OF FILL OVER TOP OF PIPE, INCLUDING PAVEMENT THICKNESS.
$L_1$ = LENGTH OF PIPE TO BE MEASURED WHEN PLACED IN ACCORDANCE WITH SECTION 624.
$L_2$ = LENGTH OF PIPE TO BE MEASURED WHEN PLACED IN ACCORDANCE WITH SECTION 603.




## CONSTRUCTION MINIMUM COVER FOR RIGID PIPE




## CONCRETE PIPE WITHOUT END SECTIONS
NOTE: USE THE H THAT IS GREATER FOR MAXIMUM ALLOWABLE FILL HEIGHT.

| TYPE OF PIPE | HEIGHT OF FILL OVER TOP OF PIPE, H (FEET) CLASS OF PIPE (0.01 IN. CRACK D-LOAD) | | | | |
|---|---|---|---|---|---|
| | CLASS CIR II<br>CLASS VE II<br>CLASS HE II<br>1000 D | CLASS CIR III<br>CLASS VE III<br>CLASS HE III<br>1350 D | CLASS CIR IV<br>CLASS VE IV<br>CLASS HE IV<br>2000 D | CLASS CIR V<br>CLASS VE V<br>———<br>3000 D | ———<br>CLASS VE VI<br>———<br>4000 D |
| CIRCULAR (CIR) | 1 TO 18 | 1 TO 25 | ± 25 TO 37 | ± 37 TO 45 | |
| VERTICAL ELLIPTICAL (VE) | 1 TO 18 | 1 TO 25 | ± 25 TO 37 | ± 37 TO 45 | ± 45 TO 62 |
| HORIZONTAL ELLIPTICAL (HE) | 1 TO 18 | 1 TO 25 | ± 25 TO 37 | | |

## ALLOWABLE RANGE OF HEIGHTS FOR FILL OVER REINFORCED CONCRETE PIPE
(ALL SIZES)

| Computer File Information | |
|---|---|
| Creation Date: 07/31/19 | |
| Designer Initials: JBK | R-X |
| Last Modification Date: 07/31/19 | R-X |
| Detailer Initials: LTA | R-X |
| CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English | R-X |

| Sheet Revisions Date: | Comments |
|---|---|
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Project Development Branch JBK

# REINFORCED CONCRETE PIPE

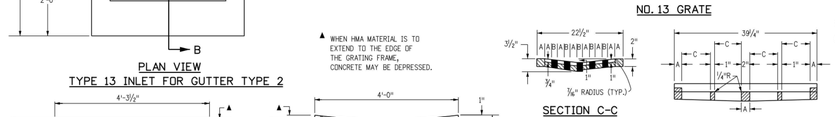
Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-603-2
Standard Sheet No. 1 of 1
Project Sheet Number:

PLAN VIEW
TYPE 13 INLET FOR GUTTER TYPE 2

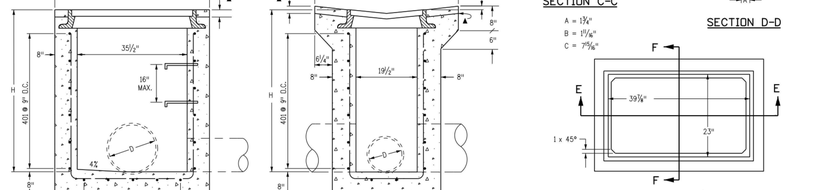
NO. 13 GRATE

▲ WHEN HMA MATERIAL IS TO EXTEND TO THE EDGE OF THE GRATING FRAME, CONCRETE MAY BE DEPRESSED.




SECTION C-C

SECTION D-D




SECTION A-A
D MAX = 30 IN. FOR H > 4 FT.

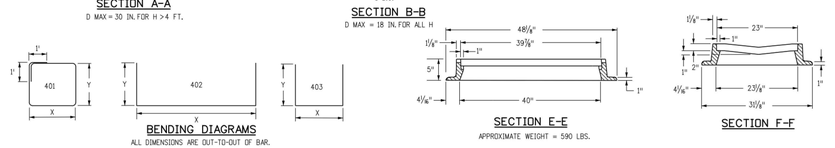
SECTION B-B
D MAX = 18 IN. FOR ALL H

NO. 13 GRATING & FRAMES

| H | CONCRETE CU. YDS. | REINFORCING STEEL θ LB. | NO. OF 401 BARS REQ'D. | MAXIMUM PIPE I.D. SEC. A-A IN. | SEC. B-B IN. |
|---|---|---|---|---|---|
| 3'-0" | 1.3 | 72 | 4 | 18 | 18 |
| 3'-6" | 1.5 | 76 | 4 | 24 | 18 |
| 4'-0" | 1.6 | 90 | 5 | 30 | 18 |
| 4'-6" | 1.8 | 104 | 6 | 30 | 18 |
| 5'-0" | 1.9 | 109 | 6 | 30 | 18 |
| 5'-6" | 2.1 | 122 | 7 | 30 | 18 |
| 6'-0" | 2.2 | 136 | 8 | 30 | 18 |
| 6'-6" | 2.4 | 141 | 8 | 30 | 18 |
| 7'-0" | 2.5 | 154 | 9 | 30 | 18 |
| 7'-6" | 2.7 | 168 | 10 | 30 | 18 |
| 8'-0" | 2.8 | 173 | 10 | 30 | 18 |
| 8'-6" | 3.0 | 187 | 11 | 30 | 18 |
| 9'-0" | 3.1 | 200 | 12 | 30 | 18 |
| 9'-6" | 3.3 | 205 | 12 | 30 | 18 |
| 10'-0" | 3.4 | 219 | 13 | 30 | 18 |

θ INCLUDES 1% FOR OVERRUN.
NOTE: CONCRETE QUANTITIES INCLUDE VOLUME OCCUPIED BY PIPE.

QUANTITIES FOR ONE INLET




BENDING DIAGRAMS
ALL DIMENSIONS ARE OUT-TO-OUT OF BAR.

SECTION E-E
APPROXIMATE WEIGHT = 590 LBS.

SECTION F-F

| MARK | NO. REQ'D. | DIMENSIONS X | Y | LENGTH |
|---|---|---|---|---|
| 401 | 4 | 3'-6" | 2'-2" | 13'-4" |
| 402 | 2 | 3'-4⅛" | * 2'-4⅛" | 8'-5⅛" |
| 403 | 5 | 2'-1⅛" | * 2'-7" | 7'-2⅛" |

* ADD 6 IN. TO THIS DIMENSION FOR EACH 6 IN. INCREASE OF "H" OVER 3 FT.-0 IN.

BAR LIST FOR H = 3 FT.-0 IN.

| Computer File Information | |
|---|---|
| Creation Date: 07/04/12 Initials: DD | |
| Last Modification Date: 07/04/12 Initials: LTA | R-X |
| Full Path: www.coloradodot.info/business/designsupport | R-X |
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| CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English | R-X |

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|---|---|
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# CONCRETE INLET TYPE 13

Issued By: Project Development Branch July 4, 2012

STANDARD PLAN NO.
M-604-13
Sheet No. 1 of 1


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MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

| # | Date | Issue / Description | Init. |
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| Project No: | MRS01 |
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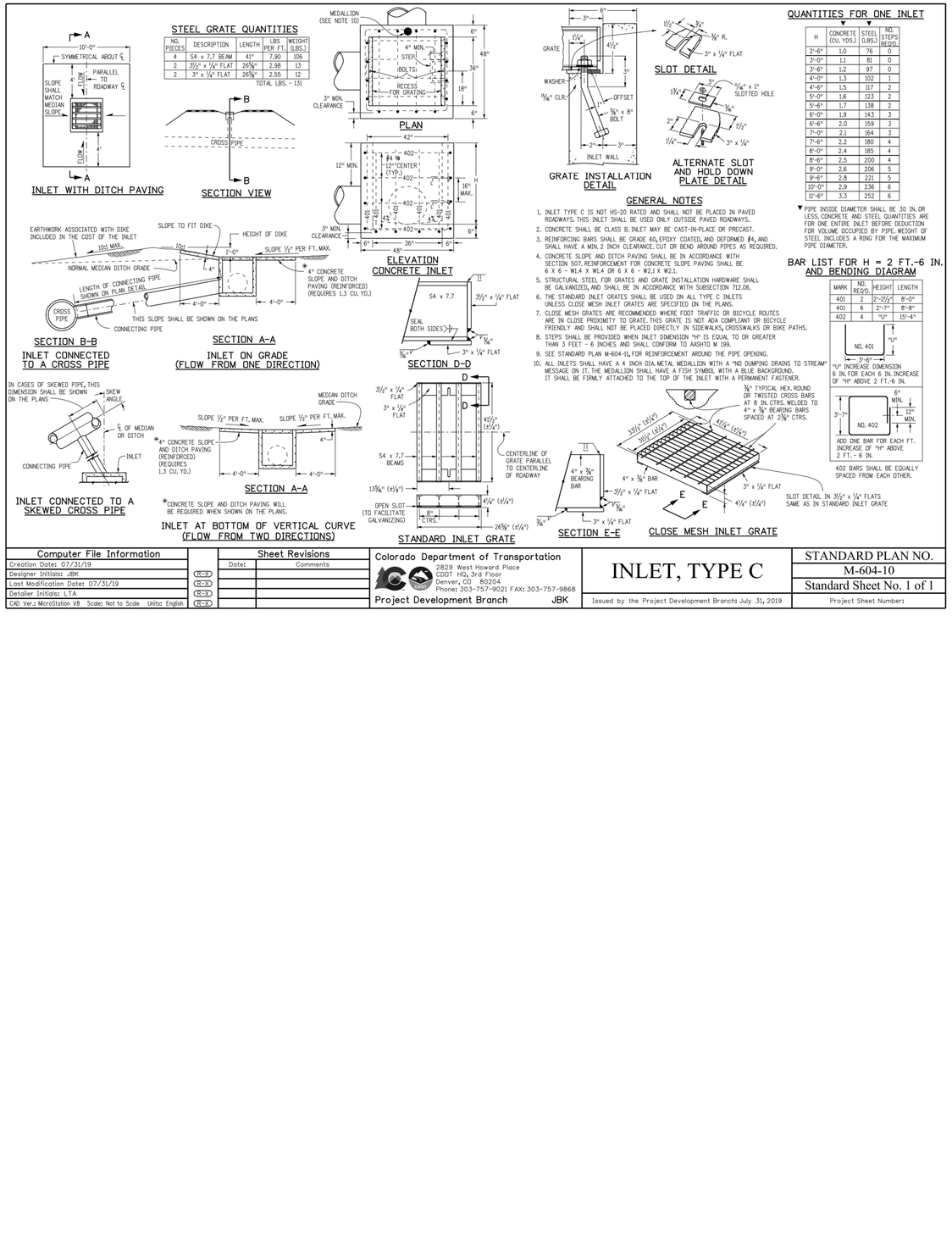
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

STORM DRAIN DETAILS

VR239 & PPR2336

C5.4
Sheet 19 of 25




## STEEL GRATE QUANTITIES

| NO. PIECES | DESCRIPTION | LENGTH | LBS PER FT. | WEIGHT (LBS.) |
|---|---|---|---|---|
| 4 | S4 x 7.7 BEAM | 41" | 7.90 | 106 |
| 2 | 3½" x ¼" FLAT | 26⅝" | 2.98 | 13 |
| 2 | 3" x ¼" FLAT | 26⅝" | 2.55 | 12 |

TOTAL LBS. - 131

## QUANTITIES FOR ONE INLET

| H | CONCRETE (CU. YDS.) | STEEL (LBS.) | NO. STEPS REQD. |
|---|---|---|---|
| 2'-6" | 1.0 | 76 | 0 |
| 3'-0" | 1.1 | 81 | 0 |
| 3'-6" | 1.2 | 97 | 0 |
| 4'-0" | 1.3 | 102 | 1 |
| 4'-6" | 1.5 | 117 | 2 |
| 5'-0" | 1.6 | 123 | 2 |
| 5'-6" | 1.7 | 138 | 2 |
| 6'-0" | 1.9 | 143 | 3 |
| 6'-6" | 2.0 | 159 | 3 |
| 7'-0" | 2.1 | 164 | 3 |
| 7'-6" | 2.2 | 180 | 4 |
| 8'-0" | 2.4 | 185 | 4 |
| 8'-6" | 2.5 | 200 | 4 |
| 9'-0" | 2.6 | 206 | 5 |
| 9'-6" | 2.8 | 221 | 5 |
| 10'-0" | 2.9 | 236 | 6 |
| 11'-6" | 3.3 | 252 | 6 |

▼ PIPE INSIDE DIAMETER SHALL BE 30 IN. OR LESS. CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

## GENERAL NOTES

1. INLET TYPE C IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. REINFORCING BARS SHALL BE GRADE 60, EPOXY COATED, AND DEFORMED #4, AND SHALL HAVE A MIN. 2 INCH CLEARANCE. CUT OR BEND AROUND PIPES AS REQUIRED.
4. CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 507. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W1.4 X W1.4 OR 6 X 6 - W2.1 X W2.1.
5. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED, AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
6. THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH INLET GRATES ARE SPECIFIED ON THE PLANS.
7. CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
8. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET - 6 INCHES AND SHALL CONFORM TO AASHTO M 199.
9. SEE STANDARD PLAN M-604-11 FOR REINFORCEMENT AROUND THE PIPE OPENING.
10. ALL INLETS SHALL HAVE A 4 INCH DIA. METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.

## BAR LIST FOR H = 2 FT.-6 IN. AND BENDING DIAGRAM

| MARK | NO. REQD. | HEIGHT | LENGTH |
|---|---|---|---|
| 401 | 2 | 2'-2½" | 8'-0" |
| 401 | 6 | 2'-7" | 8'-8" |
| 402 | 4 | "U" | 15'-4" |

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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

| Date: | Comments |
|---|---|
| | |

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Project Development Branch JBK

# INLET, TYPE C

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-604-10
Standard Sheet No. 1 of 1
Project Sheet Number:


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MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

| # | Date | Issue / Description | Init. |
|---|---|---|---|

| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

STORM DRAIN DETAILS

VR239 & PPR2336

C5.5
Sheet 20 of 25

## SITE LEGEND

- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE
- EXISTING ADJACENT LOT LINE
- PROPOSED LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- PROPOSED ROAD CENTERLINE
- EXISTING ROAD CENTERLINE
- PROPOSED RIDGE LINE
- PROPOSED SWALE LINE
- EXISTING SWALE LINE
- 100YR FLOODPLAIN BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARDRAIL
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- EXISTING EDGE OF ASPHALT
- PROPOSED SIDEWALK
- PROPOSED TRAIL
- PROPOSED GRAVEL PER ECM TABLE D-7
- RIPRAP OUTFALL PADS
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED BOLLARDS

## GRADING LEGEND

- 5460 — EXISTING MAJOR CONTOUR
- 52 — EXISTING MINOR CONTOUR
- 5465 — PROPOSED MAJOR CONTOUR
- 66 — PROPOSED MINOR CONTOUR
- 2.00% — EXISTING SLOPE – PERCENT
- 4:1 — EXISTING SLOPE – RISE/RUN
- 2.00% — PROPOSED SLOPE – PERCENT
- 4:1 — PROPOSED SLOPE – RISE/RUN
- 89.00 HP — PROPOSED SPOT ELEVATION – HIGH POINT
- 89.00 LP — PROPOSED SPOT ELEVATION – LOW POINT
- 89.00 TOB — PROPOSED SPOT ELEVATION – TOP OF BERM
- 89.00 FL — PROPOSED SPOT ELEVATION – FLOW LINE
- 89.00 TG — PROPOSED SPOT ELEVATION – TOP OF GRATE
- 89.00 FG — PROPOSED SPOT ELEVATION – FINISHED GRADE
- 89.00 SW — PROPOSED SPOT ELEVATION – SIDEWALK
- 89.00 EOC — PROPOSED SPOT ELEVATION – EDGE OF CONCRETE
- 89.00 EOA — PROPOSED SPOT ELEVATION – EDGE OF ASPHALT
- 89.00 ME — PROPOSED SPOT ELEVATION – MATCH EXISTING

## UTILITY LEGEND

- EXISTING WATER LINE
- PROPOSED WATER LINE
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING FIBER OPTIC STRUCTURES
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC TRANSFORMER
- EXISTING POWER POLE
- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- PROPOSED WATER METER
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING STORM SEWER MANHOLE
- PROPOSED STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE

## BASIS OF BEARING

ALL BEARINGS ARE GRID BEARINGS OF THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NORTH AMERICAN DATUM 1983. BEARINGS ARE BASED ON THE SOUTH LINE OF LOTS 2, 3, & 4 OF FALCON RANCHETTES, AND IS CONSIDERED TO BEAR S89°40'45"W. DEFINED BY FOUND MONUMENTS AS FOLLOWS: A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHEAST CORNER OF LOT 2; AND A NO. 4 REBAR WITH A 1-1/4" YELLOW PLASTIC CAP STAMPED "LS 2372", BEING THE SOUTHWEST CORNER OF LOT 4.

## BENCHMARK

THE SOUTHWEST CORNER OF LOT 1 WOODMEN HILLS FILING NO. 4, MONUMENTED BY A NO. 4 REBAR WITH A YELLOW PLASTIC CAP STAMPED "PLS 24964"
NAVD88 ELEVATION = 6947.67

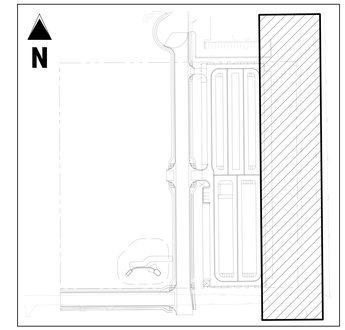
## CAUTION – NOTICE TO CONTRACTOR

1. ALL UTILITY LOCATIONS SHOWN ARE BASED ON MAPS PROVIDED BY THE APPROPRIATE UTILITY COMPANY AND FIELD SURFACE EVIDENCE AT THE TIME OF SURVEY AND IS TO BE CONSIDERED AN APPROXIMATE LOCATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES, PUBLIC OR PRIVATE, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIESTO THE ENGINEER PRIOR TO CONSTRUCTION.
2. WHERE A PROPOSED UTILITY CROSSES AN EXISTING UTILITY, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF SUCH EXISTING UTILITY, EITHER THROUGH POTHOLING OR ALTERNATIVE METHOD. REPORT INFORMATION TO THE ENGINEER PRIOR TO CONSTRUCTION.

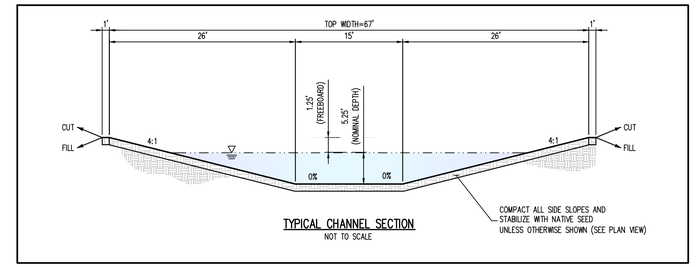
811 Know what's below. Call before you dig.

NOTE: CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION. CONTRACTOR SHALL HAVE LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THEIR COST.

SURVEYOR TO OBTAIN AUTOCAD FILE FROM ENGINEER AND VERIFY ALL HORIZONTAL CONTROL DIMENSIONING PRIOR TO CONSTRUCTION STAKING. SURVEYOR MUST VERIFY ALL BENCHMARK, BASIS OF BEARING AND DATUM INFORMATION TO ENSURE IMPROVEMENTS WILL BE AT THE SAME HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DESIGN CONSTRUCTION DRAWINGS. PRIOR TO CONSTRUCTION STAKING ANY DISCREPANCY MUST BE REPORTED TO OWNER AND ENGINEER PRIOR TO CONTINUATION OF ANY FURTHER STAKING OR CONSTRUCTION WORK.

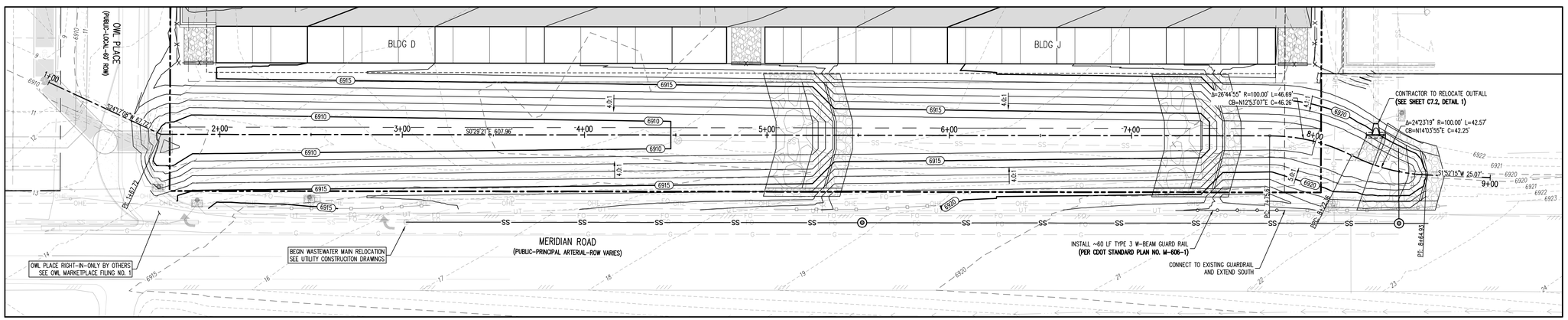



KEYMAP
SCALE: 1"=200'

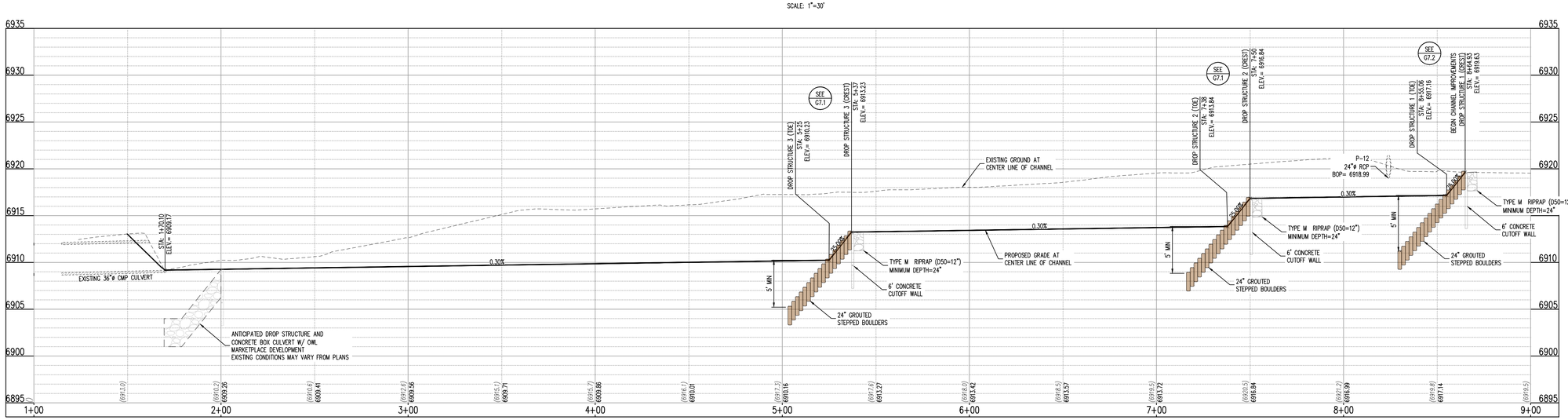



TYPICAL CHANNEL SECTION
NOT TO SCALE

N
0 15 30
SCALE: 1"=30'




CHANNEL PLAN
SCALE: 1"=30'




CHANNEL PROFILE (STA: 1+00 – 9+00)
SCALES: HORIZONTAL 1"=30', VERTICAL 1"=6'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MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

| # | Date | Issue / Description | Init. |
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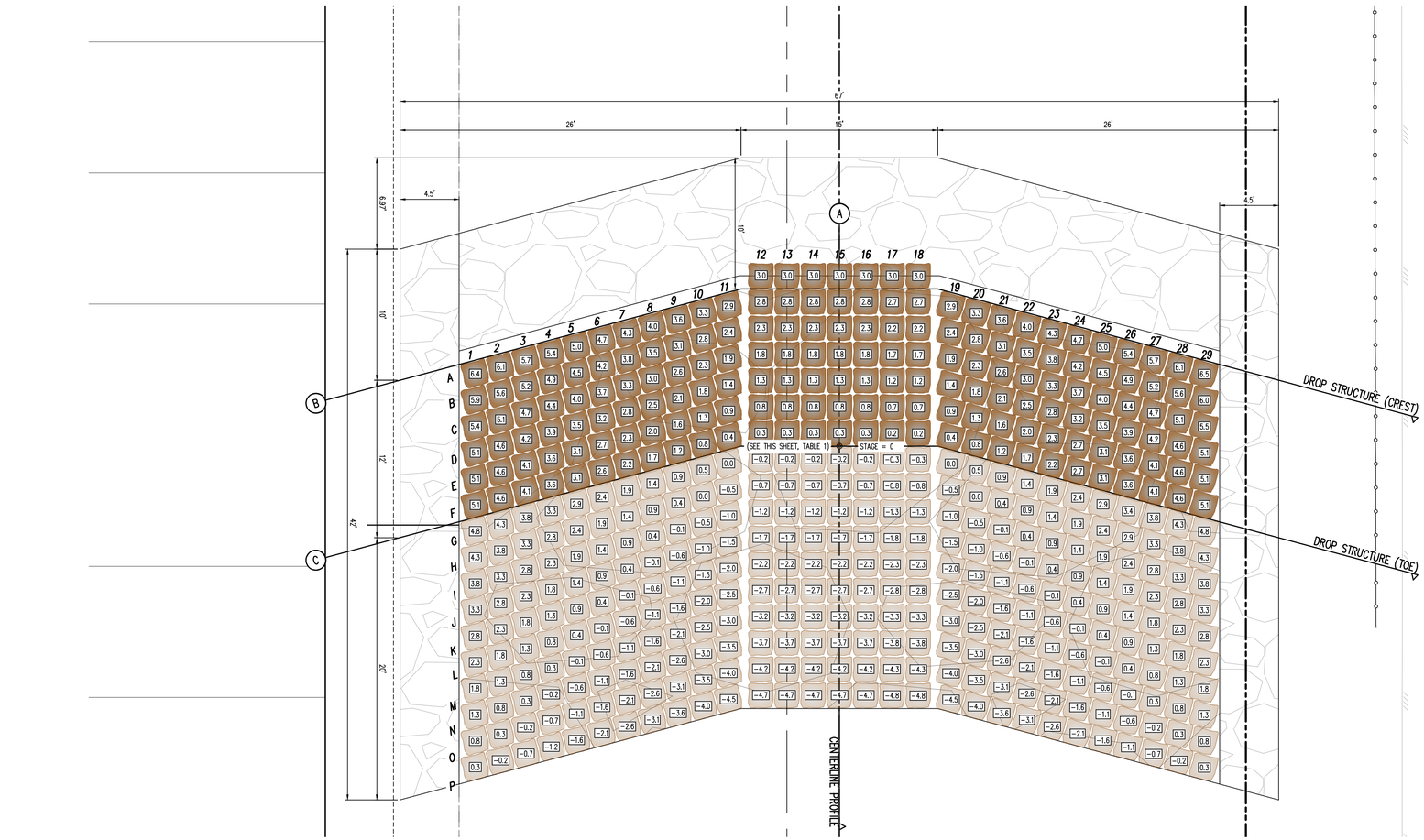
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

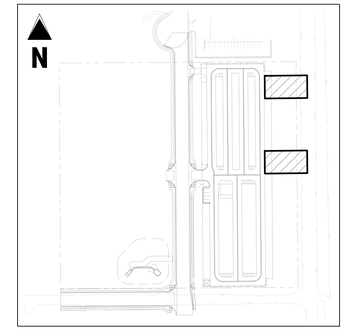
CHANNEL PLAN & PROFILE

VR239 & PPR2336

C6.1




1 DROP STRUCTURE (#2, #3) – PLAN VIEW
SCALE: 1"=5'



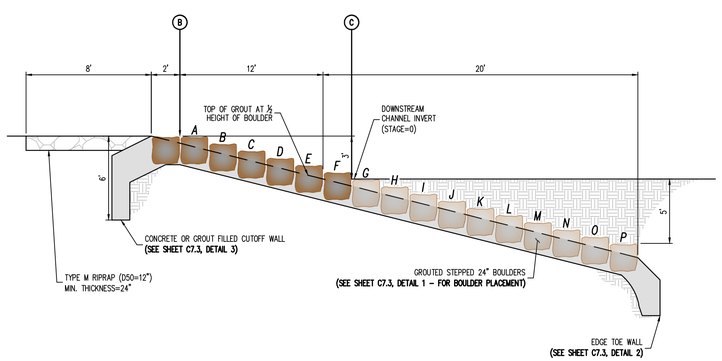

KEYMAP
SCALE: 1"=200'

| TABLE 1: DROP STRUCTURE STAGE ELEVATIONS | |
|---|---|
| DROP STRUCTURE #2 | 6913.84 |
| DROP STRUCTURE #3 | 6910.23 |

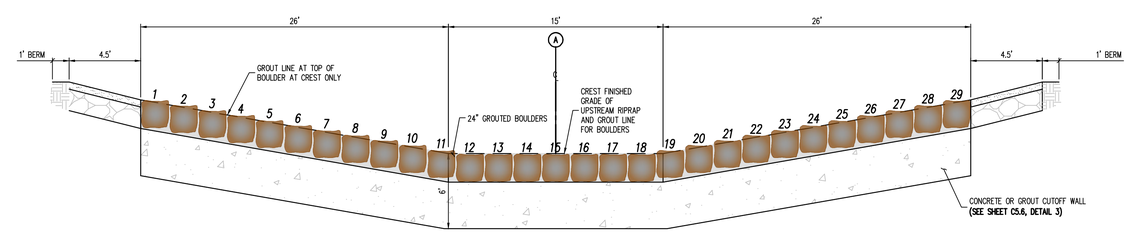
NOTE: STAGE=0 IS LOCATED AT THE TOE OF CHANNEL ALONG THE CENTER LINE ALIGNMENT, CONTRACTOR SHALL ENSURE ELEVATIONS ABOVE MATCH THE ELEVATIONS SHOWN ON PLAN & PROFILE SHEETS (C6.1)

NOTES:

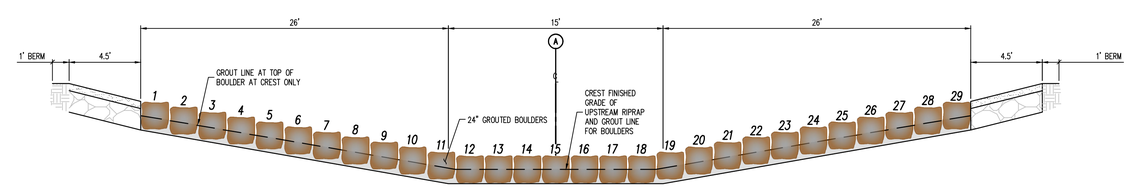
1. PLACE BOULDERS AS TIGHTLY TOGETHER AS POSSIBLE (WITHOUT TOUCHING) WHILE PROVIDING ENOUGH ROOM BETWEEN THEM TO THOROUGHLY VIBRATE THE GROUT AND TO ENSURE NO GAPS IN THE GROUT. THE SMALL DIMENSION OF A 2X4 CAN BE USED AS A GUIDE TO CHECK MINIMUM SPACING.
2. BEFORE GROUTING, CLEAN ALL DIRT AND MATERIAL FROM ROCK THAT COULD PREVENT THE GROUT FROM BINDING TO THE ROCK. KEEP BOULDERS FROM TOUCHING. AVOID SLIDING BOULDERS AGAINST SUBGRADE TO PROPERLY POSITION.
3. DUE TO VARIABILITY IN BOULDER SIZES, THE LAYOUT PROVIDED ON THIS DETAIL MAY NOT MATCH THE COMPLETED LAYOUT IN CONSTRUCTION.
4. REFER TO SHEET C7.3 FOR ADDITIONAL GROUTED BOULDER PLACEMENT NOTES AND SPECIFICATIONS.




2 DROP STRUCTURE (#2, #3) – PROFILE VIEW (SECTION A)
NOT TO SCALE




3 DROP STRUCTURE (#2, #3) – PROFILE VIEW (SECTION B)
NOT TO SCALE




4 DROP STRUCTURE (#2, #3) – PROFILE VIEW (SECTION C)
NOT TO SCALE

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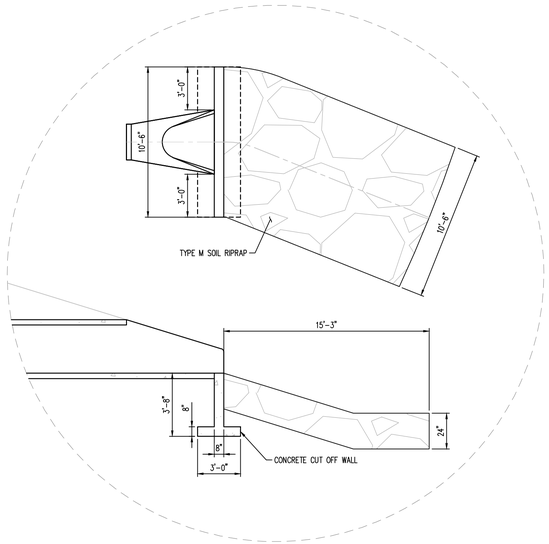
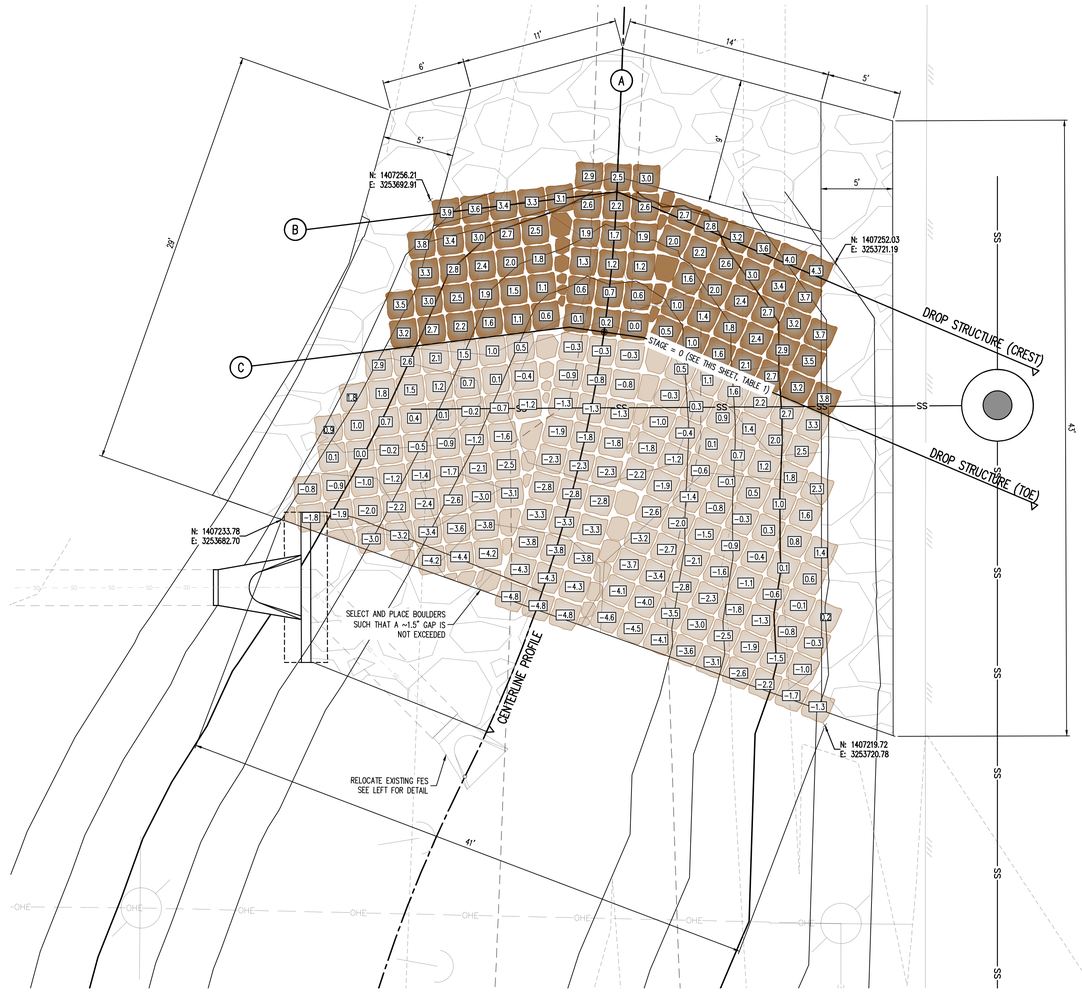
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

DROP STRUCTURE 2 & 3 DETAILS

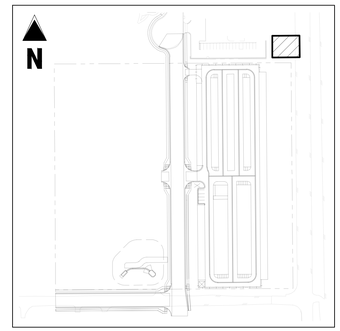
VR239 & PPR2336

C7.1




1 DROP STRUCTURE (#1) – PLAN VIEW
SCALE: 1"=5'

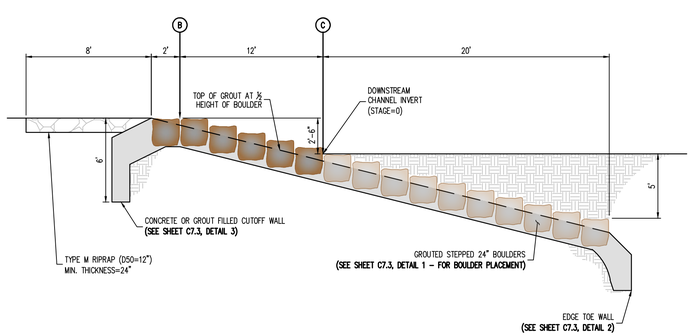



KEYMAP
SCALE: 1"=200'

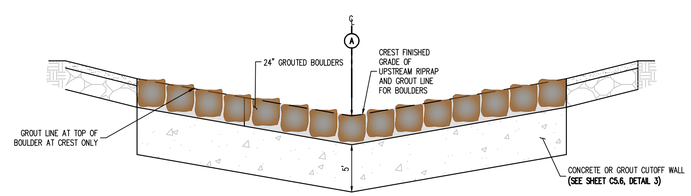
| TABLE 1: DROP STRUCTURE STAGE ELEVATIONS | |
|---|---|
| DROP STRUCTURE #1 | 6917.16 |
| NOTE: STAGE=0 IS LOCATED AT THE TOE OF CHANNEL ALONG THE CENTER LINE ALIGNMENT. CONTRACTOR SHALL ENSURE ELEVATIONS ABOVE MATCH THE ELEVATIONS SHOWN ON PLAN & PROFILE SHEETS (C6.1) | |

## NOTES:

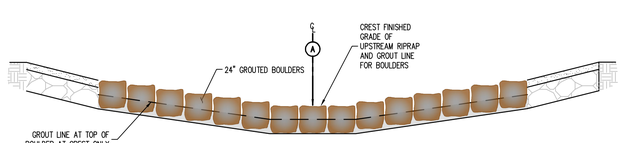
1. PLACE BOULDERS AS TIGHTLY TOGETHER AS POSSIBLE (WITHOUT TOUCHING) WHILE PROVIDING ENOUGH ROOM BETWEEN THEM TO THOROUGHLY VIBRATE THE GROUT AND TO ENSURE NO GAPS IN THE GROUT. THE SMALL DIMENSION OF A 2X4 CAN BE USED AS A GUIDE TO CHECK MINIMUM SPACING.
2. BEFORE GROUTING, CLEAN ALL DIRT AND MATERIAL FROM ROCK THAT COULD PREVENT THE GROUT FROM BINDING TO THE ROCK. KEEP BOULDERS FROM TOUCHING. AVOID SLIDING BOULDERS AGAINST SUBGRADE TO PROPERLY POSITION.
3. DUE TO VARIABILITY IN BOULDER SIZES, THE LAYOUT PROVIDED ON THIS DETAIL MAY NOT MATCH THE COMPLETED LAYOUT IN CONSTRUCTION.
4. REFER TO SHEET C7.3 FOR ADDITIONAL GROUTED BOULDER PLACEMENT NOTES AND SPECIFICATIONS.




2 DROP STRUCTURE (#1) – PROFILE VIEW (SECTION A)
NOT TO SCALE




3 DROP STRUCTURE (#1) – PROFILE VIEW (SECTION B)
NOT TO SCALE




4 DROP STRUCTURE (#1) – PROFILE VIEW (SECTION C)
NOT TO SCALE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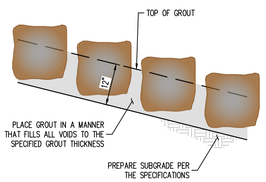
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

DROP STRUCTURE 1 DETAILS

VR239 & PPR2336

C7.2




## BOULDER PLACEMENT NOTES:

1. PLACE BOULDERS WITH THE REQUIRED BOULDER HEIGHT VERTICAL. PLACE BOULDERS AS TIGHTLY TOGETHER AS POSSIBLE (WITHOUT TOUCHING) WHILE PROVIDING ENOUGH ROOM BETWEEN THEM TO THOROUGHLY VIBRATE THE GROUT AND TO ENSURE NO GAPS IN THE GROUT. THE SMALL DIMENSION OF A 2X4 CAN BE USED AS A GUIDE TO CHECK MINIMUM SPACING.
2. BEFORE GROUTING, CLEAN ALL DIRT AND MATERIAL FROM ROCK THAT COULD PREVENT THE GROUT FROM BINDING TO THE ROCK. KEEP BOULDERS FROM TOUCHING. AVOID SLIDING BOULDERS AGAINST SUBGRADE TO PROPERLY POSITION.

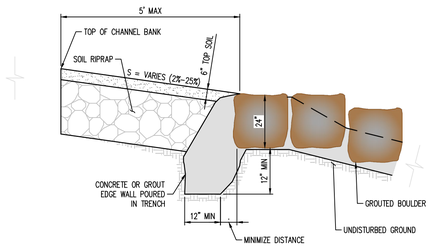
## MATERIAL SPECIFICATIONS:

1. ALL GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH EQUAL TO 3200 PSI.
2. ONE CUBIC YARD OF GROUT SHALL HAVE A MINIMUM OF SIX (6) SACKS OF TYPE II PORTLAND CEMENT.
3. A MAXIMUM OF 25% TYPE F FLY ASH MAY BE SUBSTITUTED FOR THE PORTLAND CEMENT.
4. THE AGGREGATE SHALL BE COMPRISED OF 70% NATURAL SAND (FINES) AND 30% ⅜" ROCK (COARSE).
5. THE GROUT SLUMP SHALL BE BETWEEN 4-INCHES TO 6-INCHES.
6. AIR ENTRAINMENT SHALL BE BETWEEN 5.5% AND 7.5%
7. TO CONTROL SHRINKAGE AND CRACKING, 1.5 POUNDS OF FIBERMESH, OR EQUIVALENT, SHALL BE USED PER CUBIC YARD OF GROUT.
8. COLOR ADDITIVE IN REQUIRED AMOUNTS SHALL BE USED WHEN SO SPECIFIED BY CONTRACT.

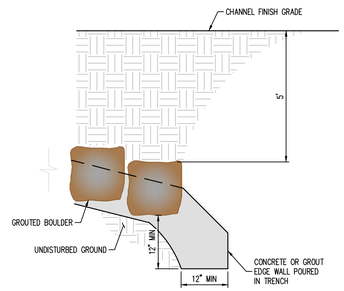
## GROUT PLACEMENT SPECIFICATIONS:

1. SPECIAL PROCEDURES SHALL BE REQUIRED FOR GROUT PLACEMENT WHEN THE AIR TEMPERATURES ARE LESS THAN 40°F OR GREATER THAN 90°F. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER OF THE PROCEDURES TO BE USED FOR PROTECTING THE GROUT.
2. GROUT SHALL BE DELIVERED BY MEANS OF A LOW PRESSURE (LESS THAN 10 PSI) GROUT PUMP USING A 2-INCH DIAMETER (MAXIMUM) NOZZLE.
3. FULL DEPTH PENETRATION OF THE GROUT INTO THE BOULDER VOIDS SHALL BE ACHIEVED BY INJECTING GROUT STARTING WITH THE NOZZLE NEAR THE BOTTOM AND RAISING IT AS THE ROUT FILLS, WHILE VIBRATING GROUT INTO PLACE USING A PENCIL VIBRATOR
4. ALL GROUT BETWEEN BOULDERS SHALL BE TREATED WITH A BROOM FINISH.
5. AFTER GROUT PLACEMENT, EXPOSED BOULDER FACES SHALL BE CLEANED AND FREE OF GROUT.
6. ALL FINISHED GROUT SURFACES SHALL BE SPRAYED WITH A CLEAR LIQUID MEMBRANE CURING COMPOUND AS SPECIFIED IN ASTM C309

1 GROUTED BOULDER PLACEMENT DETAIL
NOT TO SCALE

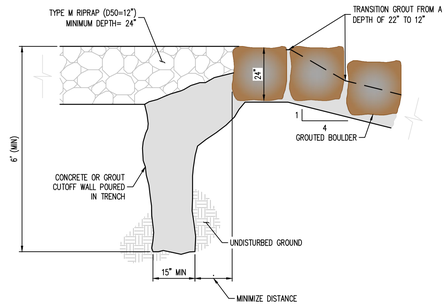



EDGE SIDE WALL DETAIL




EDGE TOE WALL DETAIL

2 EDGE WALL DETAIL
NOT TO SCALE




3 CUT-OFF WALL DETAIL
NOT TO SCALE

## SOIL RIPRAP SPECIFICATIONS:

1. CONTRACTOR SHALL EXCAVATE AREAS TO RECEIVE SOIL RIPRAP TO THE SPECIFIED DEPTH.
2. SUBGRADE SHOULD BE COMPACTED TO NINETY-FIVE PERCENT (95%) MAXIMUM DENSITY.
3. NO BEDDING MATERIAL IS REQUIRED FOR SOIL RIPRAP.
4. RIPRAP SHALL BE PLACED ON THE PREPARED SLOPE OR CHANNEL BOTTOM AREAS IN A MANNER WHICH WILL PRODUCE A REASONABLY WELL GRADED MASS OF STONE WITH THE MINIMUM PRACTICABLE PERCENTAGE OF VOIDS.
5. RIPRAP SHALL BE MACHINE PLACED.
6. IT IS THE INTENT OF THESE SPECIFICATIONS TO PRODUCE A FAIRLY COMPACT RIPRAP PROTECTION IN WHICH ALL SIZES OF MATERIAL ARE PLACED IN THEIR PROPER PROPORTIONS.
7. WHEN RIPRAP IS PLACED ON SLOPE, PLACEMENT SHALL COMMENCE AT THE BOTTOM OF THE SLOPE WORKING UP THE SLOPE.
8. ALL MATERIAL USED FOR RIPRAP PROTECTION FOR CHANNEL SLOPE OR BOTTOM SHALL BE PLACED AND DISTRIBUTED SUCH THAT THERE SHALL BE NO LARGE ACCUMULATIONS OF EITHER THE LARGER OR SMALLER SIZES OF STONE. SOME HAND PLACEMENT MAY BE REQUIRED TO ACHIEVE THIS DISTRIBUTION.
9. SMALLER ROCK SHALL BE SECURELY LOCKED BETWEEN THE LARGER STONE. IT IS ESSENTIAL THAT THE MATERIAL BETWEEN THE LARGER STONES NOT BE LOOSE OR EASILY DISPLACED BY FLOW.
10. THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY-FIVE PERCENT (65%) RIPRAP AND THIRTY-FIVE PERCENT (35%) SOIL BY VOLUME.
11. SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT VOIDS.
12. SOIL RIPRAP SHALL BE FREE OF BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL AND BE GRADED TO A SMOOTH COMPACTED SURFACE.
13. MIXING OF SOIL AND RIPRAP SHOULD BE DONE AT THE STOCKPILE LOCATION, NOT AT THE LOCATION WHERE SOIL RIPRAP IS TO BE PLACED.
14. MIX THIRTY-FIVE PERCENT (35%) SOIL BY VOLUME WITH STOCKPILED RIPRAP, USING ADDITIONAL MOISTURE AND CONTROL PROCEDURES THAT ENSURE A HOMOGENOUS MIXTURE; WHERE THE SOIL FILLS THE INHERENT VOIDS IN THE RIPRAP WITHOUT DISPLACING RIPRAP.
15. LAYERING THE RIPRAP AND SOIL INSTEAD OF PREMIXING MAY BE ALLOWED IF THE NATIVE SOIL IS GRANULAR.
16. PLACE A FIRST LAYER OF SMALLER SOIL RIPRAP OF APPROXIMATE D50 THICKNESS. THEN PLACE THE TOP LAYER WITH THE SURFACE ROCKS THAT ARE LARGELY D50 OR GREATER, FILLING VOIDS AS NECESSARY WITH THE SMALLER PLANTED RIPRAP.
17. THE MIXTURE SHALL BE CONSOLIDATED BY LARGE VIBRATORY EQUIPMENT OR BACKHOE BUCKET TO CREATE A TIGHT, DENSE INTERLOCKING MASS.
18. THE SOIL SHALL BE FURTHER WETTED TO ENCOURAGE VOID FILLING WITH SOIL.
19. ANY LARGE VOIDS SHALL BE FILLED WITH ROCK AND SMALL VOIDS FILLED WITH SOIL.
20. THE TOP SURFACE SHALL BE COVERED WITH FOUR (4) INCHES OF TOPSOIL SUCH THAT NO ROCK POINTS ARE PROTRUDING.
21. THE FINAL SURFACE SHALL BE THOROUGHLY WETTED FOR GOOD COMPACTION, SMOOTHED AND COMPACTED BY VIBRATING EQUIPMENT.

Galloway
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COLORADO REGISTERED PROFESSIONAL ENGINEER 38164 05/21/2024

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CONSTRUCTION DRAWINGS
MERIDIAN STORAGE
MERIDIAN STORAGE, LLC
VR239 & PPR2336

STATE OF COLORADO, MERIDIAN ROAD & OWL PLACE
EL PASO COUNTY, FALCON, CO 80931

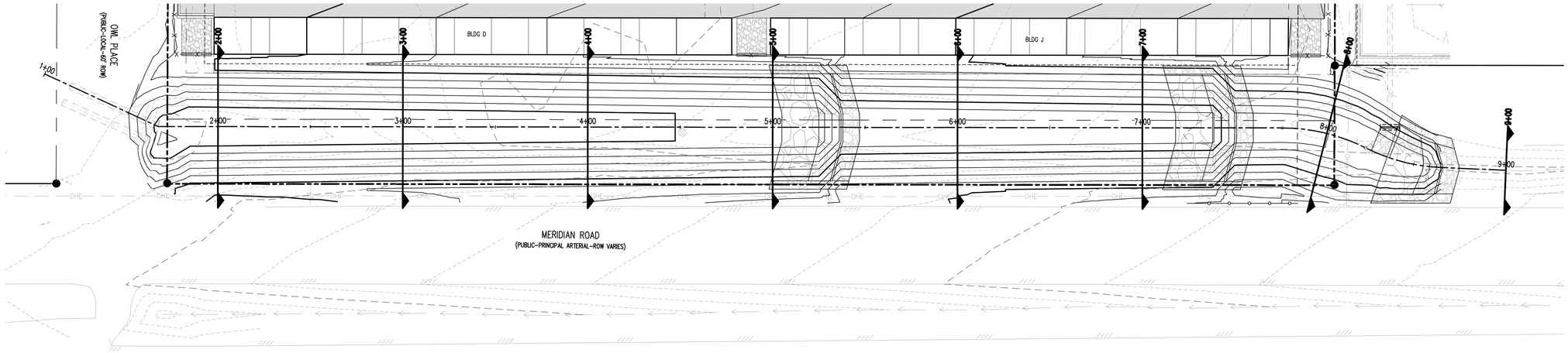
| # | Date | Issue / Description | Init. |
|---|---|---|---|

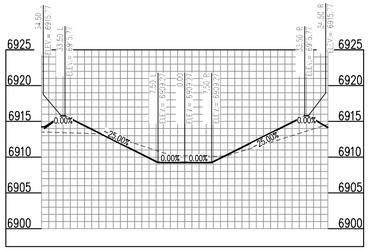
| | |
|---|---|
| Project No: | MRS01 |
| Drawn By: | JDM |
| Checked By: | BAS, CMWJ |
| Date: | 05/06/2024 |

DROP STRUCTURE GENERAL DETAILS

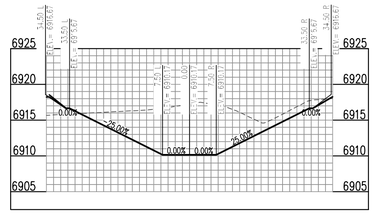
VR239 & PPR2336

C7.3



PROP. MERIDIAN ROAD CHANNEL (RMT064) (2+00) – SCALE: H: 1"=20' V: 1"=10'



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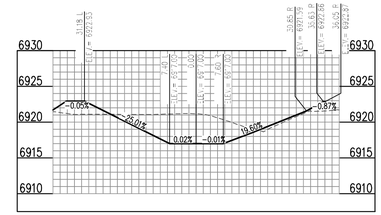

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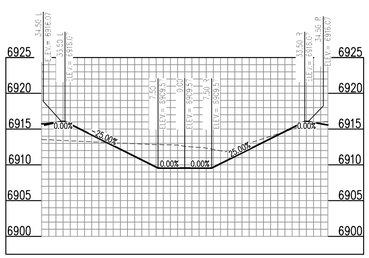

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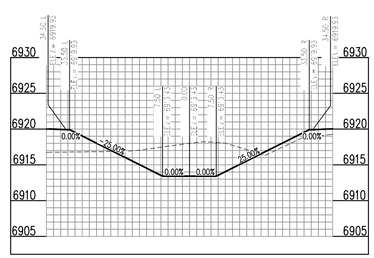

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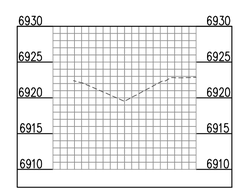

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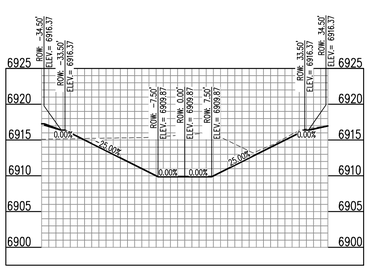
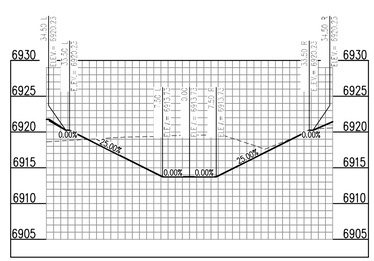


PROP. MERIDIAN ROAD CHANNEL (RMT064) (4+00) – SCALE: H: 1"=20' V: 1"=10'



PROP. MERIDIAN ROAD CHANNEL (RMT064) (7+00) – SCALE: H: 1"=20' V: 1"=10'

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CHANNEL SECTIONS

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C8.1