Memorandum

To: Chad Pulsipher
CC: Canyons School District
From: Jacob Lewis, Meridian Engineering

Date: August 20, 2024
Subject: Draper Park Middle School Addendum-2
MEI Pro # 24032

Memo

ADDENDUM-2 SHEET REVISIONS

CG400:

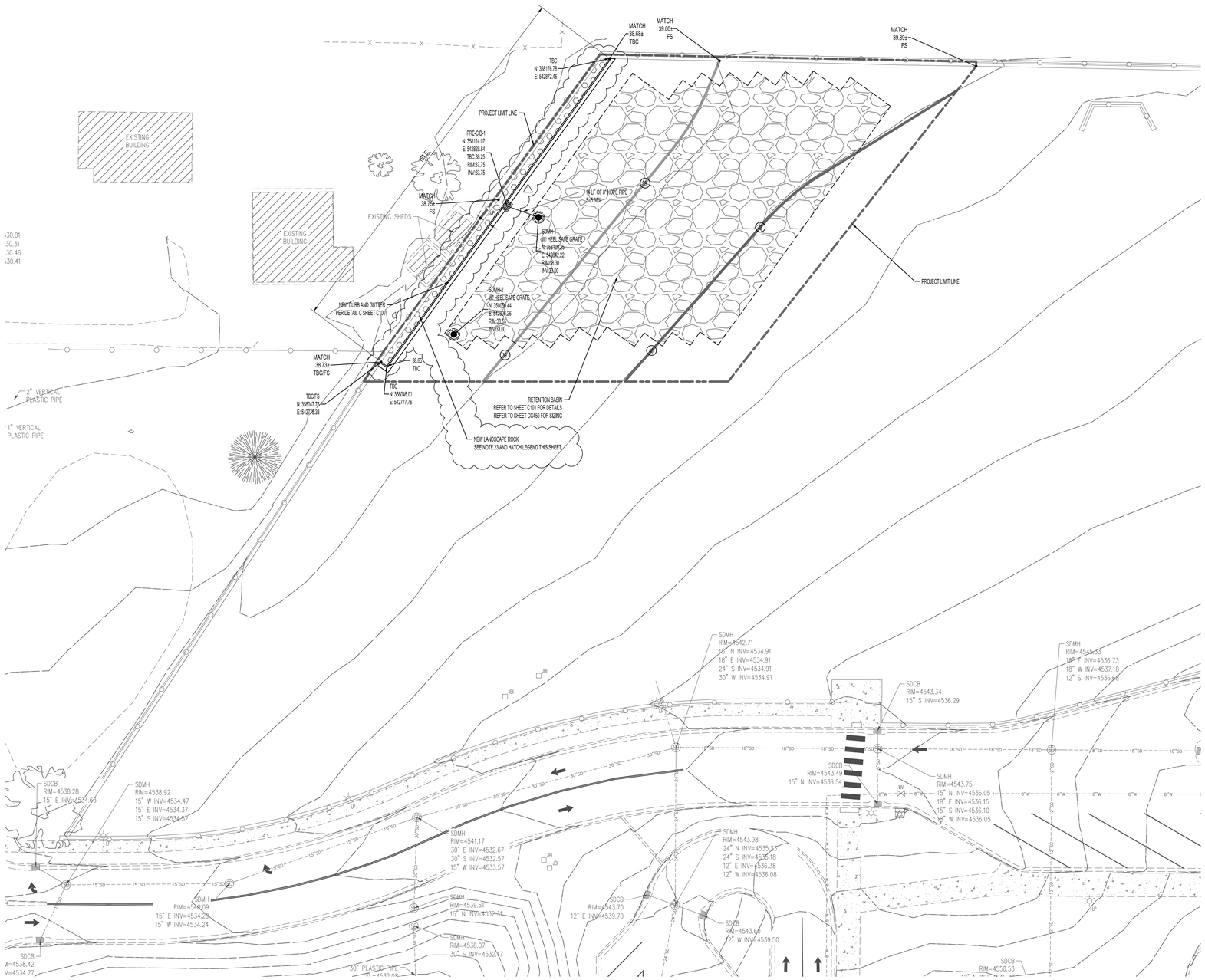
- General notes have been updated.
- Hatch legend has been added.
- Hatch added to show landscape rock behind the new curb and gutter.

334100 – Storm Drainage System Specification:

- Specification section has been added.

Thank you,
Jacob Lewis

Meridian Engineering, Inc.
1628 West 11010 South, Suite 102 • South Jordan, Utah 84095
Phone: 801.569.1315 • Fax: 801.569.1319



GENERAL GRADING NOTES:

1. CONTOURS OF THE SITE ARE BASED ON A SURVEY BY MERIDIAN ENGINEERING. REFER TO SHEET C200 FOR PROJECT BENCH MARK AND BASIS OF BEARING.
2. PROVIDE APPROVED SILT PROTECTION FOR ALL NEW AND EXISTING CATCH BASINS UNTIL LANDSCAPING IS WELL ESTABLISHED AND PARKING IS COMPLETE. THE PIPING SYSTEM SHALL BE CLEANED OUT BEFORE FINAL APPROVAL. USE MIRAFI "DANDY BAG" OR ANOTHER APPROVED EQUIVALENT FOR EXISTING INLET PROTECTION. REFER TO SHEET C500 AND C510.
3. DIMENSIONS OR COORDINATES ARE TO THE CENTER OF CATCH BASINS FOR AREA INLETS AND AT THE CENTER OF THE CATCH BASIN AT TBC FOR INLETS IN CURB AND GUTTER.
4. PIPING LENGTHS ARE APPROXIMATE LENGTHS AND ARE ROUNDED TO THE NEAREST FOOT, LENGTHS ARE FROM CENTER TO CENTER OF INLETS OR CLEANOUTS. PIPE SLOPES ARE ALSO APPROXIMATE. USE INVERTS AT EACH BOX FOR CONTROL OF PIPE INSTALLATION.
5. "TBC" IS TOP BACK OF CURB ELEVATIONS. "FS" IS FINISH SURFACE ELEVATIONS. "TOC" IS TOP OF CONCRETE ELEVATIONS. "TOW" IS TOP OF WALL ELEVATIONS. "BOT" IS FINISH SURFACE AT BOTTOM OF WALL ELEVATIONS. "FL" IS FLOW LINE.
6. TRANSITION FACE OF CURB TO BE FLUSH TO ADJACENT FINISHED SURFACE WHERE INDICATED BY "TBC/FS" TO FULL HEIGHT OVER 9' (MIN).
7. ALL LANDSCAPE AREAS SHALL HAVE 4" MINIMUM OF TOPSOIL.
8. ALL STORM WATER TO BE RETAINED ONSITE USING 15"/HR PERCOLATION RATE PER GEOTECHNICAL REPORT FOR THE 100-YEAR STORM EVENT.
9. DO NOT DRIVE HEAVY EQUIPMENT OR TRUCKS OVER EXCAVATED SUBGRADE. SOFT AREAS CAUSED BY ROUTING HEAVY EQUIPMENT OR TRUCKS OVER SUBGRADE WILL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. REPAIRS TO BE COMPLETED AS OUTLINED IN THE SPEC SECTION WITH UP TO 2' OF IMPORTED STRUCTURAL GRANULAR FILL TO STABILIZE SOFT AREAS CAUSED BY ROUTING HEAVY EQUIPMENT OR TRUCKS OVER EXCAVATED SUBGRADE.
10. SITE SOILS MAY NOT SUPPORT CONSTRUCTION TRAFFIC DURING WET PERIODS OF THE YEAR. CONTRACTOR WILL BE RESPONSIBLE TO PLACE GRANULAR FILL AND/OR COBBLE MATERIALS AS NECESSARY TO MAINTAIN ACCESS TO THE SITE THROUGHOUT THE CONSTRUCTION SITE AT ALL TIMES. EXCESS MATERIAL SHALL BE REMOVED AS REQUIRED TO COMPLETE THE SITE TO THE GRADES SHOWN ON GRADING PLANS. ALSO REFER TO GEOTECHNICAL INVESTIGATION SHEETS FOR SITE SOIL PREPARATION REQUIREMENTS.
11. PROVIDE TEMPORARY STORM DRAIN PUMPING, PONDING, BERMING, PIPING AND INLETS OR OTHER MEASURES TO RETAIN CONSTRUCTION STORM DRAIN RUNOFF ON SITE DURING CONSTRUCTION UNTIL THE NEW SYSTEM IS OPERATIONAL. ALL CONSTRUCTION SITE RUNOFF TO HAVE HEAVY SEDIMENT REMOVED PRIOR TO RELEASING TO EXISTING SITE DRAIN SYSTEM. PROTECT ADJACENT BUILDING FROM CONSTRUCTION RUNOFF AT ALL TIMES.
12. THERE SHOULD BE NO STANDING WATER ONSITE. ALL STORM WATER SHALL DRAIN TO AN INLET OR AREA DRAIN. CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD IF ANY LOW SPOTS THAT DO NOT DRAIN ARE ENCOUNTERED. A WATER TEST WILL BE PERFORMED BY THE CONTRACTOR WITH THE ENGINEER OF RECORD IN ATTENDANCE OR A SURVEY OF THE NEW IMPROVEMENTS PROVIDED TO THE ENGINEER AT COMPLETION OF THE PROJECT TO VERIFY THAT ALL STORM DRAIN WATER DRAINS AS DESIGNED.
13. ALL "MATCH" LOCATIONS INDICATE THAT THE CONTRACTOR IS TO MATCH THE EXISTING GRADE. AN APPROXIMATE ESTIMATE IS PROVIDED BY THE ENGINEER BASED ON AN INTERPOLATION OF NEAREST SPOT ELEVATIONS PROVIDED BY THE SURVEY. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THESE ELEVATIONS. IF THE ELEVATION PROVIDED BY THE ENGINEER VARIES GREATLY FROM THE ACTUAL ELEVATION FOUND BY THE CONTRACTOR THE CONTRACTOR IS TO NOTIFY THE ENGINEER SO THAT THE ENGINEER CAN PROVIDE FURTHER DIRECTION.
14. GRADE UNIFORMLY BETWEEN SPOT ELEVATIONS AND CONTOURS UNLESS NOTED OTHERWISE. IF ANY QUESTIONS ARISE ABOUT THE PROPOSED GRADING SHOWN ON PLANS CONTACT THE ENGINEER OF RECORD BEFORE FIELD GRADING.
15. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL STUDY REFERENCED IN PLAN SET. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS BEING PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOIL REPORT.
16. NO STORM WATER TO ENTER THE RETENTION BASIN UNTIL THE PIPING SYSTEM AND PRE-TREATMENT INLET HAS BEEN INSTALLED. CONTRACTOR TO CLEAN ENTIRE SYSTEM BEFORE IT IS ATTACHED TO THE RETENTION BASIN.
17. NOTIFY ENGINEER OF RECORD IF THERE ARE ANY CONFLICTS WITH UTILITY LINES OR IF ASSUMED INVERTS VARY, FOR FURTHER COORDINATION.
18. CONTRACTOR IS RESPONSIBLE TO INFORM THE ENGINEER OF RECORD IF THE GRADES SHOWN ON THE SURVEY DO NOT MEET THE ACTUAL GRADES IN THE FIELD.
19. RESTORE SOD AND SPRINKLER SYSTEM AROUND NEW IMPROVEMENTS IN LANDSCAPE. SPRINKLER SYSTEM MUST BE MAINTAINED AND REMAIN IN SERVICE FOR REMAINDER OF GRASS AREA DURING CONSTRUCTION.
20. REMOVE AND REPLACE ANY DAMAGED CURB, GUTTER, OR SIDEWALK ALONG FRONTAGE BEFORE FINAL INSPECTION.
21. ALL GUTTERS TO SLOPE 0.5% MINIMUM TOWARDS CURB INLET BOX. CONTRACTOR TO NOTIFY ENGINEER OF RECORD IF THE PROPOSED GRADE DOES NOT MEET 0.5% SLOPE IN GUTTER.
22. SPOT ELEVATION PREFIX OF 45 HAS BEEN DROPPED FROM THE ELEVATIONS IE: ELEVATION 39.50 = 4539.50.
23. ALL LANDSCAPE REPAIR INCLUDING NEW LANDSCAPE ROCK TO BE DONE BY THE CONTRACTOR WITH COORDINATION WITH THE SCHOOL DISTRICT. MATCH COLOR AND TYPE OF ROCK TO EXISTING ADJACENT LANDSCAPE ROCK. ⚠
24. WHEN INSTALLING THE RETENTION BASIN, A MANUFACTURER'S REPRESENTATIVE SHOULD BE ON SITE TO CERTIFY THAT THE BASIN HAS BEEN INSTALLED CORRECTLY PER THE CONTRACT DOCUMENT DESIGN. THE MANUFACTURER OF THE RETENTION BASIN WILL NEED TO PROVIDE A LETTER UPON REQUEST, TO THE CITY, INDICATING THAT THE BASIN WAS INSTALLED AND CONSTRUCTED TO HOLD THE SPECIFIED STORMWATER INDICATED IN THESE PLANS.

GRADING LEGEND

40	MAJOR CONTOUR
39	MINOR CONTOUR

STRUCTURE LABEL	DETAIL #
PRE-CIB - PRETREATMENT CURB AND GUTTER INLET	DETAIL A SHEET C100
SDMH - STORM DRAIN MANHOLE	DETAIL B SHEET C100

HATCH LEGEND

3'-4' LANDSCAPE ROCK 8" THICK (MATCH ON SITE LANDSCAPE ROCK COLOR LAID OVER LANDSCAPE FABRIC) DOUBLE WASH BEFORE PLACEMENT OVER FABRIC. SEE NOTE 23 ON THIS SHEET. ⚠

UNDERGROUND DETENTION BASIN REFER TO CG400 PLANS

0 20 40
SCALE 1"=20'

NO.	DATE	BY	REVISIONS
			ADDENDUM 2
⚠	8/20/24	JL	

DRAWN JL
SURVEYED
CHECKED NL
DATE 22-MAY-2024

MERIDIAN ENGINEERING, INC.
9980 SOUTH 300 WEST, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 568-3315 FAX (801) 568-1319

DRAPER PARK MIDDLE SCHOOL
13133 SOUTH 1300 EAST
DRAPER, UT 84020

DRAPER PARK MIDDLE SCHOOL SITE IMPROVEMENTS
GRADING PLAN
CONSTRUCTION DOCUMENTS

STATE OF UTAH
05/22/2024
JACOB MICHAEL LEWIS
13470254-2202

COMP. FILE

PROJECT NO. 24032

SHEET NO. CG400

SECTION 334100- STORM DRAINAGE SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 General Requirement Sections apply to the work of this Section.

1.2 SUMMARY

A. The extent of work is indicated on the Drawings and includes the following:

1. New Cleanout Boxes and inlets and Piping.

B. The work includes but is not limited to:

Perform trenching and backfilling required for work of this Section.

1.3 RELATED SECTIONS

A. Procedures and quality of excavating, backfilling, and compacting are specified in Division 31 Section “Earthwork”.

B. Concrete requirements related to this work are specified in Division 32 Section “Site Concrete.”

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Firms regularly engaged in manufacturing of products of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years. Products are limited to those of domestic manufacturers.

B. Installer Qualifications: Firm with at least 3 years of successful installation experience on projects of similar scope.

C. Codes and Standards: Comply with all applicable codes and requirements, including amendments and modifications by local jurisdictions, related to the performance of this work including, but not necessarily limited to the following:

International Building Code
International Plumbing Code
International Mechanical Code
American National Standards Institute (ANSI)
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
Welding: Qualify Welding procedures, welders, and operators in accordance with ASME B31.1, or ASME B31.9 or ANSI and ASTM as applicable, for shop and project site welding of piping work.
Utah Safety Standards (OSHA), Utah State Industrial Council

1.5 SUBMITTALS

A. Product Data: Submit manufacturers' technical data and installation instructions for each type of material precast items and product furnished.

B. Record Drawings: At project closeout, submit Record Drawings of installed utility service lines in accordance with Division 1 Requirements.

1.6 PROJECT CONDITIONS

A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
   1. Notify Owner and Architect no fewer than two days in advance of proposed interruption of service.
   2. Do not proceed with interruption of service without Construction Manager's written permission.

PART 2 - PRODUCTS

2.1 STORM DRAINAGE SYSTEM COMPONENTS

A. For pipe 8" diameter or larger ADS HDPE or approved equivalent, AASHTO M 294, Type S, with smooth waterway for coupling joints. Watertight Joints: Watertight joints in accordance with ASTM D 3212 and AASHTO M 252. Bell and spigot with gaskets, ASTM F477.

B. For pipe 6" diameter or smaller, PVC Pipe: ASTM D - 3035 SDR 35, with bell and spigot type joints and elastomeric seals.

2.2 CATCH BASIN/CLEANOUT BOXES

1. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.

A. Designated Precast Concrete Catch Basins: ASTM C 913, precast, reinforced concrete; designed according to ASTM c 890 for A-16, heavy-traffic, structural loading; of depth, shape, and dimensions indicated, with provision for sealant joints.
   1. Joint Sealants: ASTM C 990, bitumen or butyl rubber.
   2. Grade Rings: Include 2 or 3 reinforced-concrete rings, of 6- to 9-inch total thickness, that match 24-inch-diameter frame and grate.
   3. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.

B. Cast-in-Place Concrete, catch Basins: Construct of reinforced concrete; designed according to ASTM C 890 for structural loading; of depth, shape, dimensions, and appurtenances indicated.
   1. Bottom Walls, and Top: Reinforced concrete.
   2. Channels and Benches: Concrete.

C. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A16. Structural loading. Include flat grate with small square or short-slotted drainage openings.
   1. Size: 24 by 24 inches minimum, unless otherwise indicated.
   2. Grate Free Area: Approximately 50 percent, unless otherwise indicated.

PART 3 - EXECUTION

3.1 GENERAL:

A. Excavate and backfill as specified in Section 312000.

B. Locate lines as close as possible to those shown on Drawings.

C. For sloped lines, grade to obtain fall required.

D. Remove debris from trench prior to laying of pipe.

E. Do not cut trenches near footings without consulting Architect.

F. Backfill only after pipe lines have been inspected and approved by Architect.

G. Failure to install joints properly shall be cause for rejection and replacement of piping

system.

3.2 INSTALLATION OF STORM DRAINAGE SYSTEM

A. General: Backfill only after pipe lines have been inspected and approved by Architect.

B. Install cleanout boxes to grade as indicated on plans. Provide concrete collar around new and existing boxes. Use 4,000 psi concrete collars around inlets and cleanout boxes to grade.

C. Install materials in accordance with Manufacturer's instructions.

D. When installing the retention basin, a Manufacturer's representative should be on site to certify that the basin has been installed correctly per the contract document design. The Manufacturer of the retention basin will need to provide a letter upon request, to the city, indicating that the basin was installed and constructed to hold the specified stormwater indicated in the Construction Documents.

E. Grout smooth with non-shrink grout all inlet box joints, piping connections or ledges.

3.3 FIELD QUALITY CONTROL

A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
   1. Submit separate reports for each system inspection.
   2. Defects requiring correction include the following:
      a. Alignment: Less than full diameter of inside of pipe is visible between structure.
      b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
      c. Crushed, broken, cracked, or otherwise damaged piping.
      d. Infiltration: Water leakage into piping.
      e. Exfiltration: Water leakage from or around piping.
   3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
   4. Reinspect and repeat procedure until results are satisfactory.

B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
   1. Do not enclose, cover, or put into service before inspection and approval.
   2. Test completed piping systems according to authorities having jurisdiction.

3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours advance notice.
4. Submit separate report for each test.

C. Leaks and loss in test pressure constitute defects that must be repaired.

D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

3.4 CLEANING

A. Clean interior of piping and storm drain boxes of dirt and superfluous materials.

END OF SECTION.