GMS, INC.

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ENGINEER'S SUPPLEMENTAL INSTRUCTIONS NO. THIRTEEN (13) (Via Posting to FTP Site and Electronic Mail)

TO: Wes Weaver

DATE: October 17, 2011

John Jacob Jeff Burst

Tyler Ammerman

Weaver Construction Management, Inc.

Patrick Danenberg

McDade Woodcock, Inc.

FROM: Roger J. Sams, P.E.

David R. Frisch, P.L.S.

GMS, Inc.

RE: Harold D. Thompson Regional Water Reclamation Facility (HDTRWRF)-Phase 1

ENGINEER'S SUPPLEMENTAL INSTRUCTIONS NO. THIRTEEN (ESI-013)

This ESI-013 is issued to provide direction for the placement of electrical duct banks and conduit extending from the Equipment, Maintenance and Storage Building electrical room. The modified drawings include EEM-1 issued with the foundation drawings for the Equipment, Maintenance and Storage Building, as well as modified drawings identified as ED-1, ESP-1 and ESP-2. These drawings reflect the discussion and decisions made at the October 6, 2011 meeting at the HDTRWRF. Please note that it was decided at that meeting to place the electrical/control conduits as the "highest" buried utility. The Construction Note on Sheet EEM-1 and the Typical Trench Details on Sheet ESP-2 provide expanded detail regarding this approach.

Attached as part of this ESI No. Thirteen (ESI-013) are the following sheets:

- EEM-1
- ED-1
- ESP-1
- ESP-2

Please incorporate these documents into the Construction Drawing set for use when placing the electrical duct banks and conduit.

ec: Lower Fountain Metropolitan Sewage Disposal District

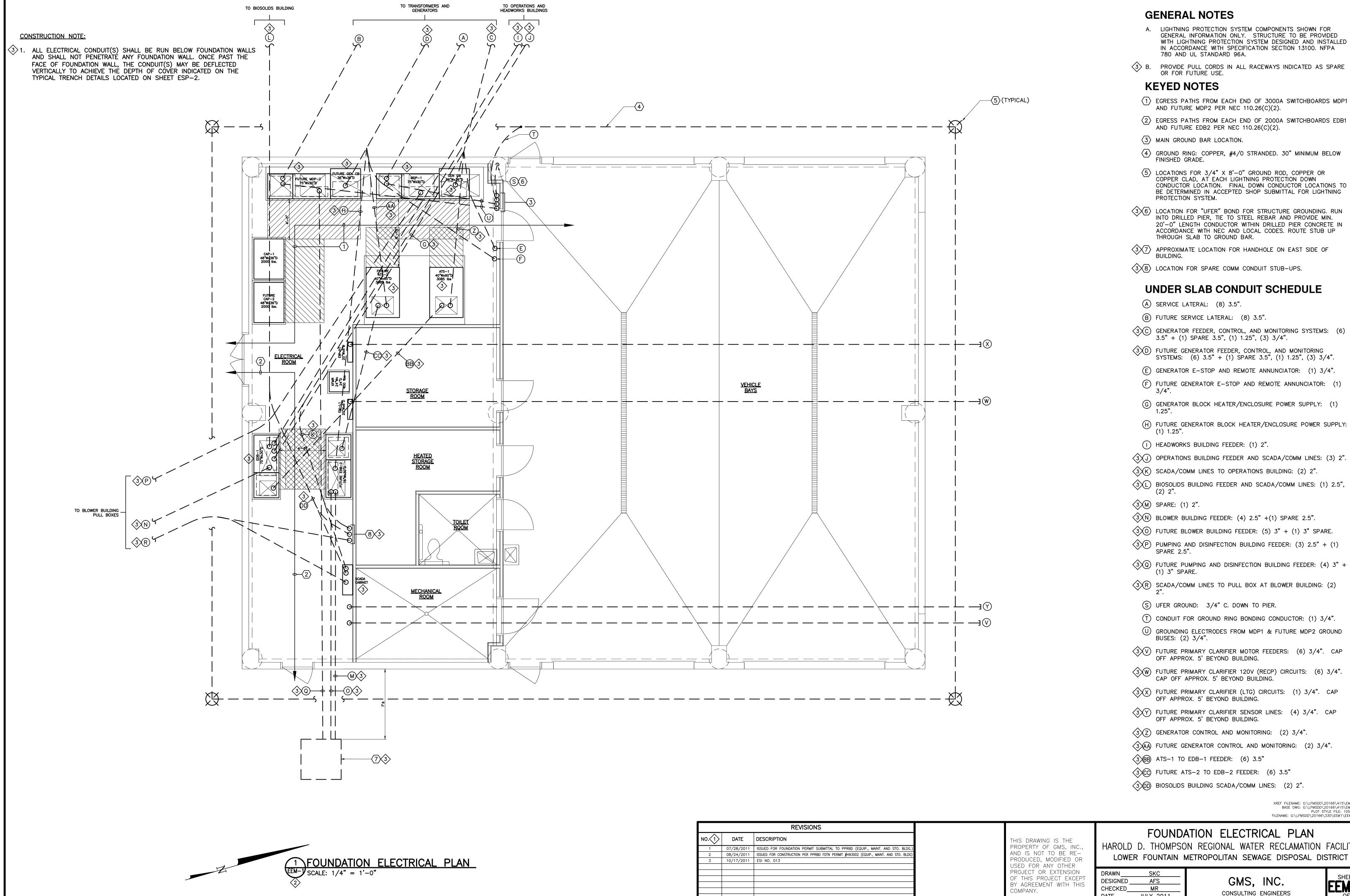
Fountain Sanitation District

Colorado Centre Metropolitan District

Vern Plant, P.E., President, Plant Engineering, Inc.

cc: Jerry Miller, GMS, Inc.

Mark Morton, P.E., GMS, Inc.



FOUNDATION ELECTRICAL PLAN

HAROLD D. THOMPSON REGIONAL WATER RECLAMATION FACILITY

JULY 2011 PROJECT NO. 20166.330

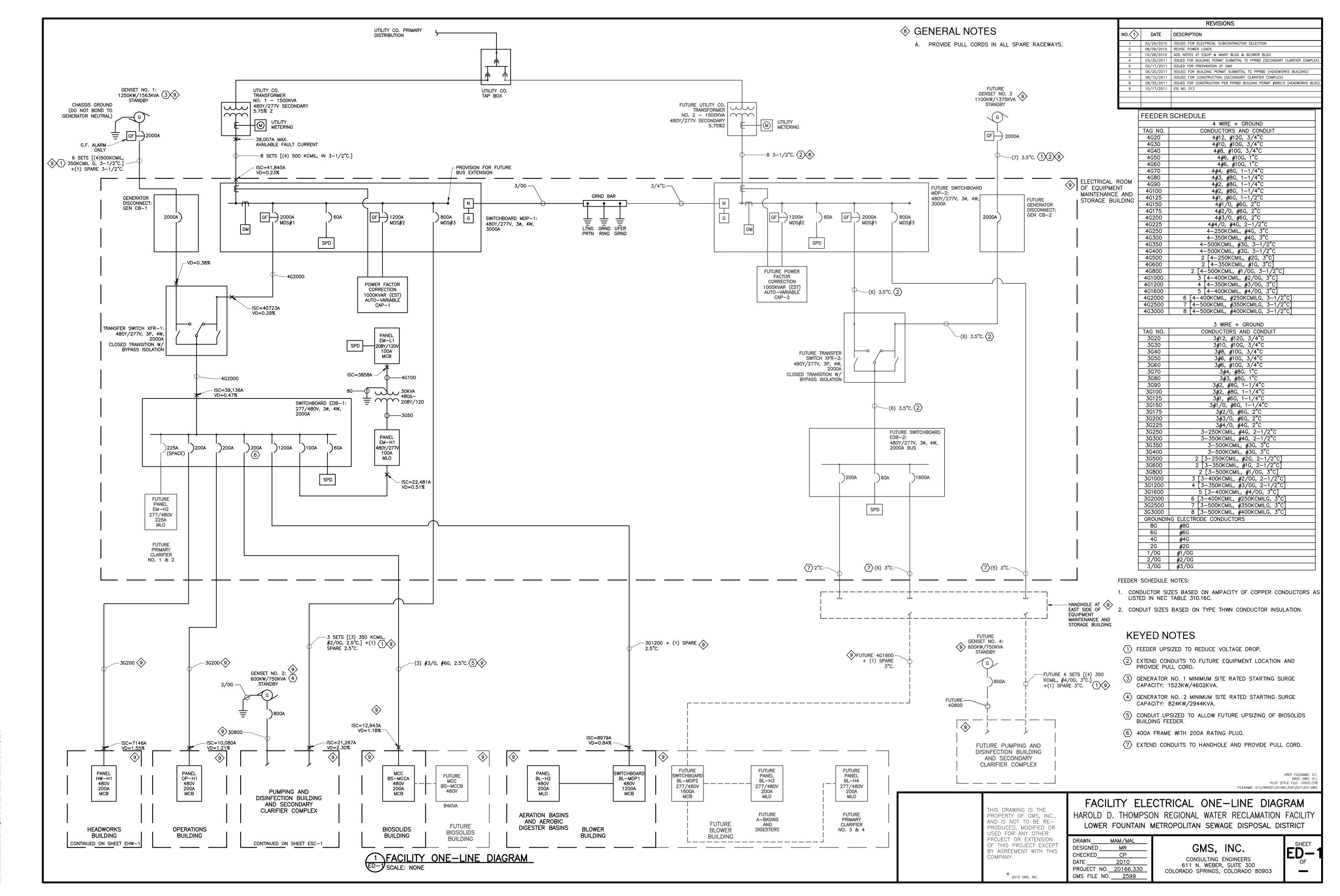
GMS FILE NO. <u>2599</u>

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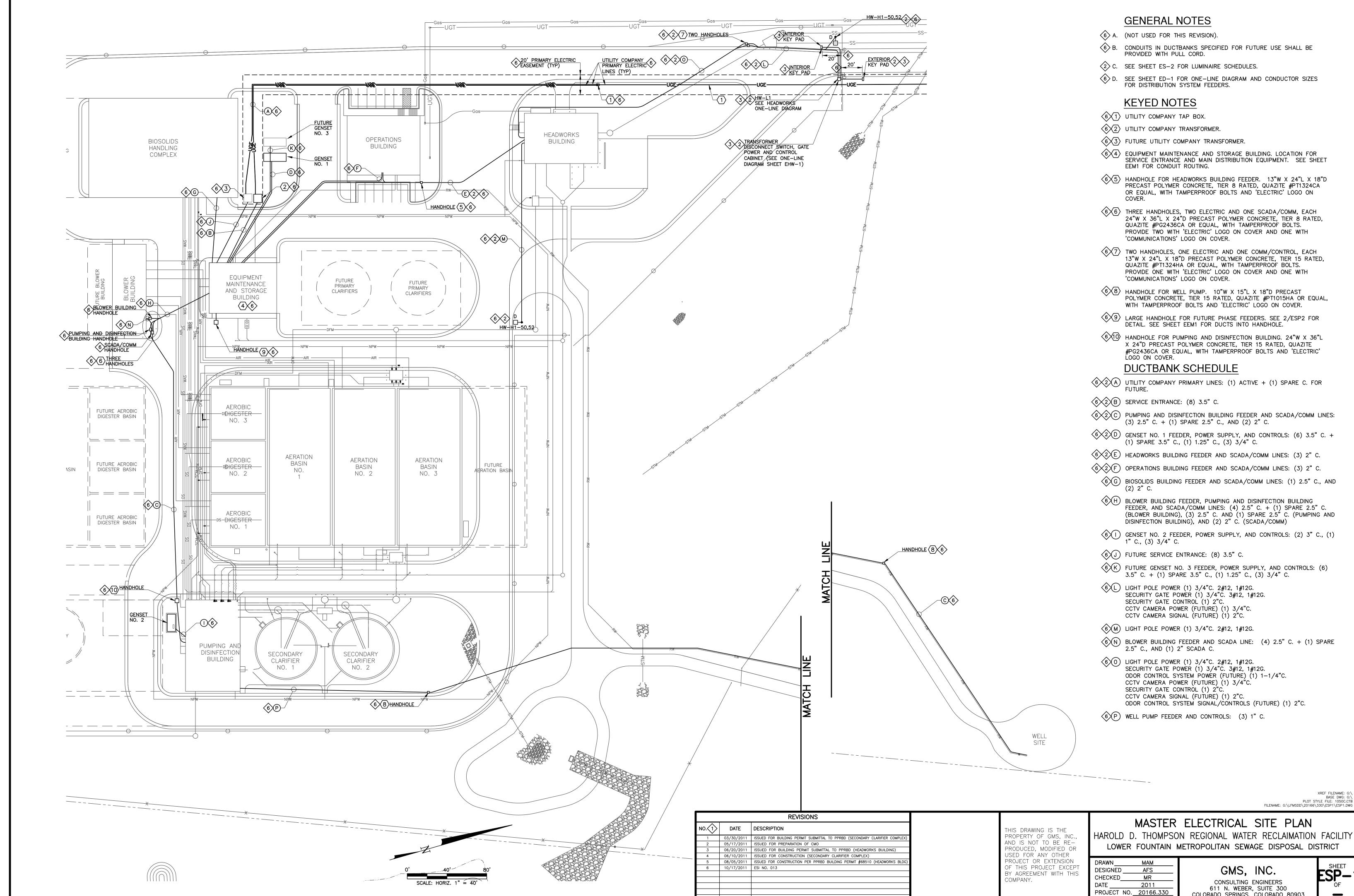
GMS, INC. CONSULTING ENGINEERS 611 N. WEBER, SUITE 300 COLORADO SPRINGS, COLORADO 80903



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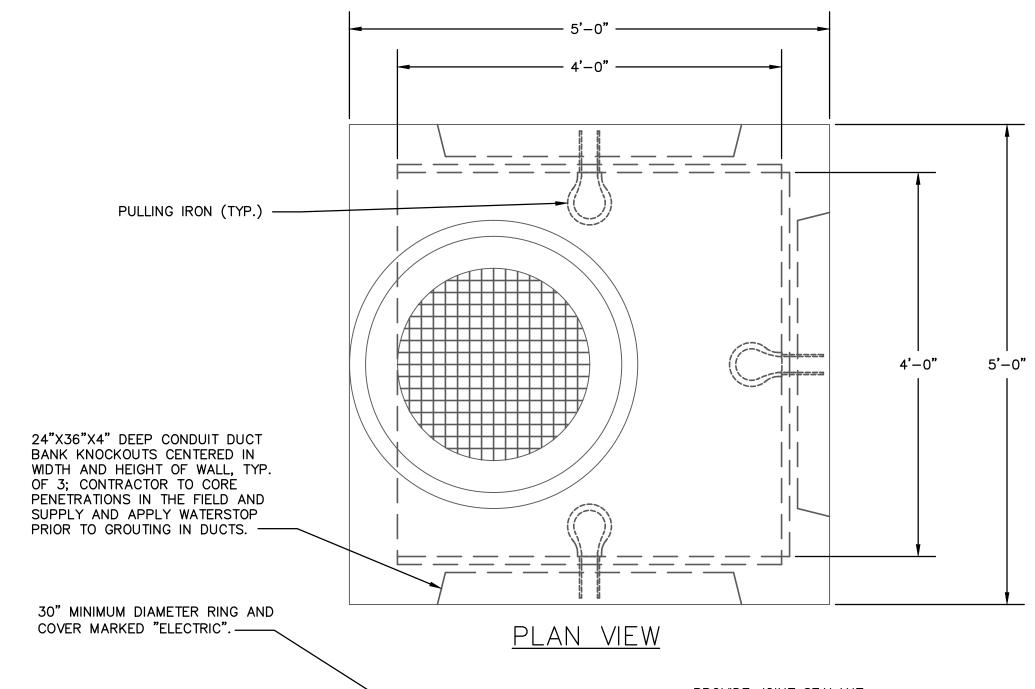
611 N. WEBER, SUITE 300

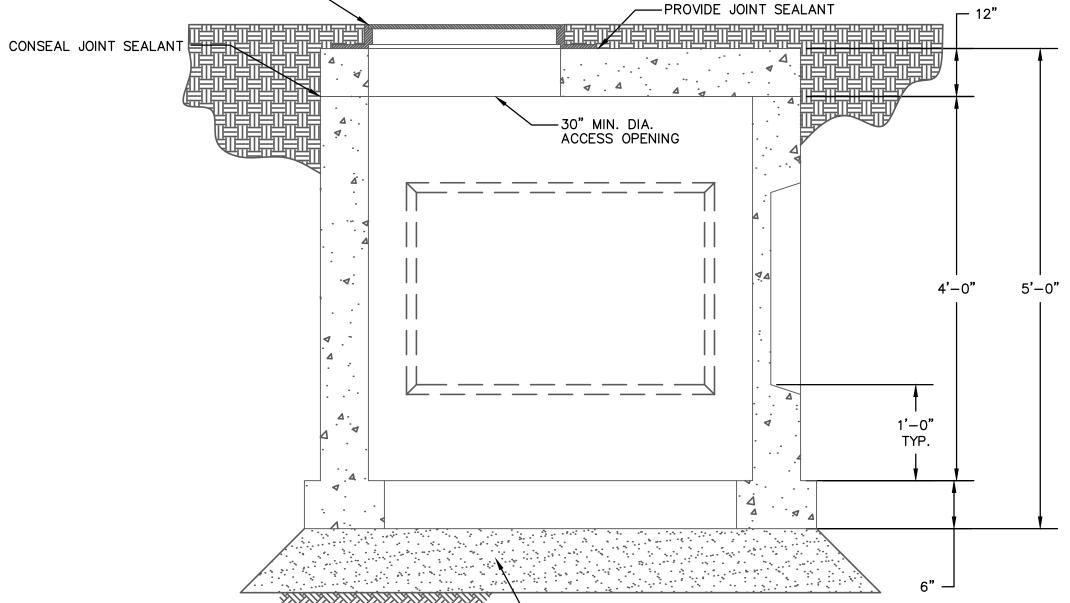
GMS FILE NO. _____2599_

COLORADO SPRINGS, COLORADO 80903



CONCRETE: 5000 PSI MINIMUM REINFORCING: GRADE 60 MINIMUM VAULT: #4 REBAR @ 12" O.C. O.C.E.W. LID: 2 LAYERS OF #5 REBAR @ 2" O.C. WALLS TO BE 6" THICK, LID TO BE 12" THICK DESIGNED TO ASTM C-857, HS-20-44 LOADINGS AND ASTM C-858





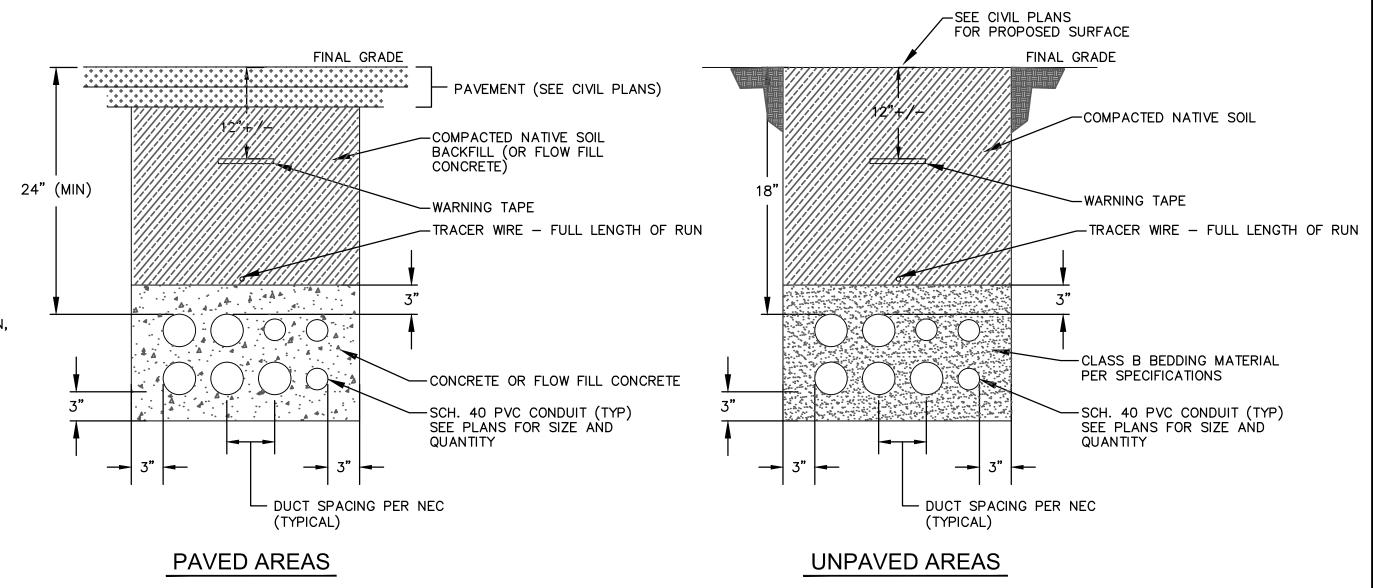
12" STRUCTURAL FILL

SECTION VIEW

2 LARGE HANDHOLE DETAIL

NO SCALE

- 1. DUCT IS TO HAVE A MINIMUM OF 3" (+1",-0") CONCRETE ENVELOPE ABOVE AND BELOW, AND 2" MINIMUM IN BETWEEN. CONDUITS SHALL BE TIED TO SPACERS.
- 2. CONCRETE ENCASEMENT SHALL EXTEND 5' BEYOND EDGE OF PAVEMENT UNDER PAVEMENT CROSSINGS.
- CONCRETE SHALL BE PROPERLY VIBRATED WHEN INSTALLED TO 24" (MIN) ASSURE COMPLETE FLOW UNDER, AROUND AND BETWEEN ALL DUCTS TO ELIMINATE ANY AIR POCKETS.
- 4. ALL RISERS AND CONDUIT BENDS TO ABOVE GROUND SHALL BE RIGID METAL CONDUIT. PROVIDE PVC TO METAL COUPLING AT ENDS OF STRAIGHT UNDERGROUND RUNS.
- 5. CONCRETE / FLOW FILL FOR DUCT BANKS SHALL MEET CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 206.02.
- 6. FOR ALL UTILITY TRENCHES, CONTRACTOR SHALL BACKFILL TRENCHES IN ACCORDANCE WITH CIVIL SPECIFICATION SECTIONS.



LOW VOLTAGE TRENCH DETAIL

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REVISIONS		
DATE	DESCRIPTION	THIS DRAWING IS THE
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		BY AGREEMENT WITH TH
		COMPANY.

ELECTRICAL SITE PLAN DETAILS HAROLD D. THOMPSON REGIONAL WATER RECLAIMATION FACILITY

LOWER	FOUNTAIN	METROPOLITAN SEWAGE DISPOSAL DIS	STRICT
DRAWN		GMS, INC. CONSULTING ENGINEERS 611 N. WEBER, SUITE 300 COLORADO SPRINGS, COLORADO 80903	SHEE ESP- OF