

CITY OF ALBUQUERQUE

Hydrology Section Planning Department
David S. Campbell, Director



Timothy M. Keller, Mayor

November 20, 2018

Matt Korte
Adams Engineering
513 Main St Suite 300
Fort Worth, TX 76102

**Re: McDonalds - 8315 Montgomery Blvd NE
Tract A-1-F of the Los Pastores Shopping Center
Grading and Drainage Plan - Engineer's Stamp dated: missing (F19D013A)**

Dear Mr. Segovia,

Based on the application received 6/18/2018, the above referenced plan cannot be approved for building permit until the following comments are addressed.

1. Please use the New DTIS form available at http://documents.cabq.gov/planning/DevelopmentReviewServices/DRAINAGE%20INF%20SHEET_ELECTRONICrev11-18.pdf when resubmitting and include the Owner's contact information. Standard resubmittal fees will apply.
2. An engineer's stamp, signature, and date are required on the G&D Plan.
3. The floor elevation of the building must be set a minimum of 1.0' above the adjacent floodplain elevation. There is a Special Flood Hazard Area in Montgomery Blvd. It is an AO (depth 1 foot) zone which may have been rounded down from 1.4' feet depth. The street flow line elevation in front of the east edge of the building 5420.7 so the minimum floor elevation should be 5423.1. Please add a note addressing the floodplain, show the floodplain on the G&D Plan, show the floor elevation on the G&D plan and indicate the direction of the roof drainage. A floodplain development permit is required for any work in the floodplain.
4. The alley and Montgomery Blvd. both have limited drainage and the plan increases the peak rate of runoff to both. The City engineer cannot approve any development who's increased runoff exceeds the downstream capacity per § 14-5-2-12(G) [http://library.amlegal.com/nxt/gateway.dll/New%20Mexico/albuqwin/chapter14zoningplanningandbuilding/article5floodhazardanddrainagecontrol?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:albuquerque_nm_mc\\$anc=JD_14-5-2-12](http://library.amlegal.com/nxt/gateway.dll/New%20Mexico/albuqwin/chapter14zoningplanningandbuilding/article5floodhazardanddrainagecontrol?f=templates$fn=default.htm$3.0$vid=amlegal:albuquerque_nm_mc$anc=JD_14-5-2-12) The Drainage Management Plan for the Los Pastores Shopping Center (Hydro# F19D013C) established an allowable discharge of 26.47cfs from the 21.18 acres draining to the pond which equates to 1.25 cfs/acre. The 0.6 acre portion of this site that currently drains to the Los Pastores Pond only contributes 0.75cfs to Montgomery after going thru the pond, but that area will contribute 2.86 cfs Montgomery with the new plan. The existing floodplain on Montgomery indicates that it does not have capacity for any increased flow from this site. This site must either drain 0.6 acres to the Los Pastores Pond, or provide an equivalent onsite pond or some combination of those two.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

5. This proposed G&D Plan also shows about a 1.5 cfs increase in direct runoff to the alley from the north half of this site which is partially offset by about 0.75 cfs decrease flow from the Los Pastores Pond if 0.6 acres of this site no longer drains to the pond. The increased flow to the alley may be allowed if the applicant can demonstrate that the alley has capacity for more flow than was shown in the Drainage Management Plan Addendum for Los Pastores Shopping Center. Otherwise ponds may have to be used to mitigate the increased flow to the alley. The Drainage Management Plan and Addendum for Los Pastores Shopping Center are available thru the City's GIS Advanced Map Viewer. See the Hydrology Section web page for instructions on how to access the files.
6. The drainage management summary on sheet 8.1 needs to be revised to include discussion of the diversion of flow from the Los Pastores Pond and the limited capacity downstream of this site in the alley and in Montgomery. The narrative should acknowledge the Drainage Management Plan for the Los Pastores Shopping Center and discuss specifically how the proposed site will conform to that plan. This level of analysis, hydrograph development, pond routing, and detailed hydraulic analysis is more easily bound into a report than spread out on 24" x 36" sheets, but either way the calculations must be stamped and signed by a registered Professional Engineer in the state of New Mexico.
7. Any portion of the peak 100 year flow rate that drains into Montgomery Blvd. will have to do so through appropriately sized sidewalk culverts. Use the weir equation to size the culvert not Manning's normal depth. The typical capacity is about 1.25 cfs per foot of opening, so two 2' wide culverts should be used. The sidewalk culvert must also extend all of the way from the curb to the right of way, and the invert should be specified at that location instead of the back of sidewalk. The culverts should be moved as far west as possible to the low corner of the pond.
8. Additional Stormwater Quality Volume (SWQV) is required for this site. The City Council and Mayor signed a new Drainage Ordinance into effect October 24, 2018 which requires a waiver for onsite management of anything less than 100% of the SWQV. It appears that onsite management of the Stormwater Quality Volume (SWQV) may be waived if private offsite mitigation is provided by deepening the existing pond north of this site. The basis for requesting a waiver of management onsite is to be clearly demonstrated on the plan. If the site does not qualify for a waiver in accordance with § 14-5-2-6(H), then the developer may choose payment in lieu or provide the total SWQV onsite by adding below grade infiltration trenches to complete the volume. The new ordinance is available on the City Hydrology Section web page (see link in footer).
9. A Private Drainage Easement and Drainage Covenant is required for the offsite storm drain on Tract A-1-E. It is near other easements which need to be shown and labeled on the plan as well as any conflicting utilities. Label Tract A-1-E, Access A, and A-1-D.
10. A Drainage Covenant is required for the first flush ponds. The original notarized form, pond exhibits (legible on 8.5x11 paper), and recording fee (\$25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.

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11. As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance, Building Permit, or Work Order.

If you have any questions, you can contact me at 924-3986 or E-mail at jhughes@cabq.gov.

Sincerely,

James D. Hughes, P.E.
Principal Engineer, Planning Dept.
Development and Review Services

CC Cesar Segovia, Architect

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 10/2018)

Project Title: _____ **Building Permit #:** _____ **Hydrology File #:** _____

DRB#: _____ **EPC#:** _____ **Work Order#:** _____

Legal Description: _____

City Address: _____

Applicant: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

Other Contact: _____ **Contact:** _____

Address: _____

Phone#: _____ **Fax#:** _____ **E-mail:** _____

TYPE OF DEVELOPMENT: _____ PLAT (# of lots) _____ RESIDENCE _____ DRB SITE _____ ADMIN SITE

IS THIS A RESUBMITTAL? _____ Yes _____ No

DEPARTMENT: _____ TRAFFIC/TRANSPORTATION _____ HYDROLOGY/DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

- _____ ENGINEER/ARCHITECT CERTIFICATION
- _____ PAD CERTIFICATION
- _____ CONCEPTUAL G & D PLAN
- _____ GRADING PLAN
- _____ DRAINAGE MASTER PLAN
- _____ DRAINAGE REPORT
- _____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
- _____ ELEVATION CERTIFICATE
- _____ CLOMR/LOMR
- _____ TRAFFIC CIRCULATION LAYOUT (TCL)
- _____ TRAFFIC IMPACT STUDY (TIS)
- _____ OTHER (SPECIFY) _____
- _____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- _____ BUILDING PERMIT APPROVAL
- _____ CERTIFICATE OF OCCUPANCY
- _____ PRELIMINARY PLAT APPROVAL
- _____ SITE PLAN FOR SUB'D APPROVAL
- _____ SITE PLAN FOR BLDG. PERMIT APPROVAL
- _____ FINAL PLAT APPROVAL
- _____ SIA/ RELEASE OF FINANCIAL GUARANTEE
- _____ FOUNDATION PERMIT APPROVAL
- _____ GRADING PERMIT APPROVAL
- _____ SO-19 APPROVAL
- _____ PAVING PERMIT APPROVAL
- _____ GRADING/ PAD CERTIFICATION
- _____ WORK ORDER APPROVAL
- _____ CLOMR/LOMR
- _____ FLOODPLAIN DEVELOPMENT PERMIT
- _____ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ **By:** _____

COA STAFF:

ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____



Wednesday, October 24, 2018

City of Albuquerque
Development Review Services

RE: 8315 Montgomery Blvd. NE – HYDROLOGY COMMENTS

Thank you for taking the time to review Site Development plans for the McDonald's at 8315 Montgomery Blvd. NE. We have addressed your comments related to the Civil Construction Plans as follows:

Hydrology Comments:

- 1) DRB approval is required if this site includes "Major Infrastructure", and solving the adjacent alley drainage problem may require Major Infrastructure. An approved drainage design and analysis is required prior to determining if DRB approval is required. *Per emails from Doug Hughes, it is expected that the developer's alley solution is nearing approval and that McDonald's plans will not need to aid in the solution. Reference Los Pastores Development plans for alley drainage.*
- 2) An engineer's stamp and signature are required on the G&D Plan. If the purpose of this plan is just DRB approval of the Amended Site Plan then the sheet title must be changed to "Conceptual Grading and Drainage Plan" and it must be labeled "Not for Construction" in big bold letters. Then a separate more detailed Grading and Drainage Plan must be approved by Hydrology prior to Building Permit. Both G&D plans must be stamped by a NM Professional Engineer. *During review phase, plans are submitted with the preliminary seal to help protect against someone utilizing preliminary plans for construction. Grading and Drainage plan will be sealed by a NM PE prior to building permit.*
- 3) The alley drainage solution must be shown on this plan. The existing alley is graded with a 15% cross slope and does not have drainage capacity to prevent public storm water from entering the private lots west of the alley. A solution to the problem must be approved by both Hydrology and Transportation prior to approval of the G&D Plan for this development. The solution must be identified on this plan. If the improvements are to be constructed as part of a separate project they should be so noted. The engineering design and analysis of the solution may either be included on the McDonalds G&D Plan or the engineering design and analysis of the solution may be included on the separate G&D Plans for the Los Pastores Shopping Center which currently has an open Work Order to build the alley. The two plans must agree and cross reference each other. *Per emails from Doug Hughes, it is expected that the developer's alley solution is nearing approval and that McDonald's plans will not need to aid in the solution. Los Pastores Shopping Center referenced on Sheet C8.1 for alley drainage.*
- 4) A revision to the Los Pastores Shopping Center G&D Plan has been submitted but has not been reviewed by hydrology. It includes construction of a variable height curb, drive pads, and gravel

driveways on the private lots west of the alley. Written approval will be required from all of those lot owners and the Transportation and DRC and a Change Order must be approved before it can be approved as the solution to the alley drainage problem, so this solution may take quite a while to get approved and it may not work at all. Solutions that don't involve the neighbors involve some kind of modification to the McDonalds Site Plan, either by changing the cross slope of the alley lowering the west side of the McDonalds site or by adding a pond outfall pipe through the McDonalds site to Montgomery Blvd. Matt Corte said that he has pictures of a headwall in the old pond that indicates a piped pond outfall existed before the Los Pastores Shopping Center, and that same pipe may be incorporated into the alley drainage solution for this project. **Per emails from Doug Hughes, it is expected that the developer's alley solution is nearing approval and that McDonald's plans will not need to aid in the solution. An additional solution – such as lowering the McDonald's site – is not proposed at this time.**

- 5) Any portion of the peak 100 year flow rate that drains into Montgomery Blvd. will have to do so through appropriately sized sidewalk culverts. No flow is allowed over the Montgomery Blvd sidewalk. Sidewalk culverts may be constructed with an SO-19 Permit if a Work Order is not required for other required infrastructure. To do so, the standard SO-19 Permit notes must be added to the G&D Plan along with hydraulic calculations, standard details, and construction notes. If a Work Order is required then the Sidewalk culverts must be constructed as part of the Work Order and an SO-19 Permit will not be allowed. **Standard detail DWG 2236, notes, and hydraulic calculations have been added to comply with the SO-19 Permit requirements.**
- 6) The proposed development plan for the McDonalds must either conform to the previously approved Drainage Management Plan for Tract A-1-F of the Los Pastores Shopping Center or a revised plan is required to determine new peak flow rates in the alley west of McDonalds and in Montgomery Blvd. using AHYMO instead of the simplified 100 year 6 hour runoff calculations in tables on sheets 8.0 and 8.2. If the proposed development plan is revised to conform to the previously approved Drainage Management Plan then the tables on sheets 8.0 and 8.2 must state the runoff rates and volumes associated with land treatments A, B, C, and D. **Flows from the McDonald's site do not worsen the alley drainage or pond drainage (and design point flows have been added to C8.1 for reference). To conform to previously approved Drainage Management Plan, Sheets C8.0 and C8.2 show the runoff rates and volumes associated with land treatments A, B, C, and D.**
- 7) The drainage summary on sheet 8.1 says basin A-1 drains into the offsite detention pond but there is not sufficient detail to see how that drainage enters the pond. Instead it appears that the drainage enters Pond 1. A typical section is required thru the north and west boundary in association with Basin A-1 and Pond 1. The sections must include horizontal and vertical dimensions to the property line and show both existing and proposed grade. **Basin A-1 currently is not proposed to drain to the offsite detention pond, but it drains to Pond 1. Pond 1 overflows via depressed curb to the alley. A section of Pond 1 is shown on Sheet C8.2 and spillway calculations are shown on sheet C8.3.**

- 8) Basin A-3 drains to 3 different ponds and basin A-6 drains to two different ponds. The drainage basin boundaries and areas must be revised to accurately identify the area draining to each first flush pond. The first flush requirements apply to all redeveloped impervious area on this site. Each pond should be sized for 0.26" of runoff from the impervious area draining to it. The City doesn't give credit for extra volume in a pond over and above that which is required for the impervious area draining into it. A waiver may be requested for redeveloped impervious surfaces not meeting the required first flush volume. The waiver request must state the area of impervious and the first flush volume and be located next to the pond volume calculations on the G&D Plan. If the waiver is granted the developer will be required to pay \$8.00/CF in lieu of constructing the required volume. **Drainage areas have been revised and two ponds have been removed. Each first flush pond now collects drainage from one basin.**
- 9) Details of each pond are required including typical sections, dimensions, and spot elevations. Volume calculations must be added to the plan for each pond based on the area of each contour using the conic method of volume calculations. **A typical pond section is shown on Sheet C8.2. Each pond has a horizontal dimension noted on Sheet C4.0 Site Plan, and spot elevations are shown on C7.0 Grading Plan. Volume calculations are tabulated on Sheet C8.2**
- 10) The term Bio Retention is inappropriate and should be replaced with the term First Flush everywhere, unless planting specifications consistent with Bio Retention are shown on the landscape plan and provided to hydrology for review and comment. **Reference to 'Bio Retention' have been replaced with 'First Flush'.**
- 11) Retaining walls, if any, must be clearly identified on the plan. Typical sections are required around the perimeter of the property especially at retaining walls. Existing and proposed spot elevations are required around the perimeter of the site at about 25' intervals. **Spot elevations were added around the perimeter. Retaining walls are not required.**
- 12) Existing Spot elevations are not legible. The minimum font size is 0.10". Dots show up instead of text around the perimeter of the site. The drainage summary on sheet 8.1 also has dots instead of text. **Text heights were increased to 0.10"**
- 13) Details of all drainage structures must be shown on the plan including pond spillways, curbs, curb cuts, inlets, headwalls, and sidewalk culverts. Hydraulic capacity calculations are required for all inlet, curb cuts, curbs carrying drainage, and pond spillways. Both the first flush elevation and the 100 year elevation must be identified for all ponds. Storm drains must be shown on the Grading sheet 7 .0 including pipe sizes and material. **Plans and details revised to show details, hydraulic calculations, and 100-yr elevations (as applicable)**

- 14) HGL calculations are required for the storm drain pipes and the HGL must be shown on a profile of each pipe specifying the pipe material, slope, invert elevations, and lengths, flow rate, and velocity. **Profile and HGL added for STRM-2. Calculations tabulated on Sheet C8.2**
- 15) A Private Drainage Easement and Drainage Covenant is required for the offsite storm drain on Tract A-1-E. It is near other easements which need to be shown and labeled on the plan as well as any conflicting utilities. Label Tract A-1-E, Access A, and A-1-D. **Private Drainage Easement and Drainage Covenant to be provided. 10' Private drainage easement shown on plans.**
- 16) A Private Facility Drainage Covenant is required for the first flush ponds. The original notarized form, pond exhibits (legible on 8.5x11 paper), and recording fee (\$25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants. **Drainage Covenant documents will be provided once grading and drainage items are approved by hydrology and ponds are set.**

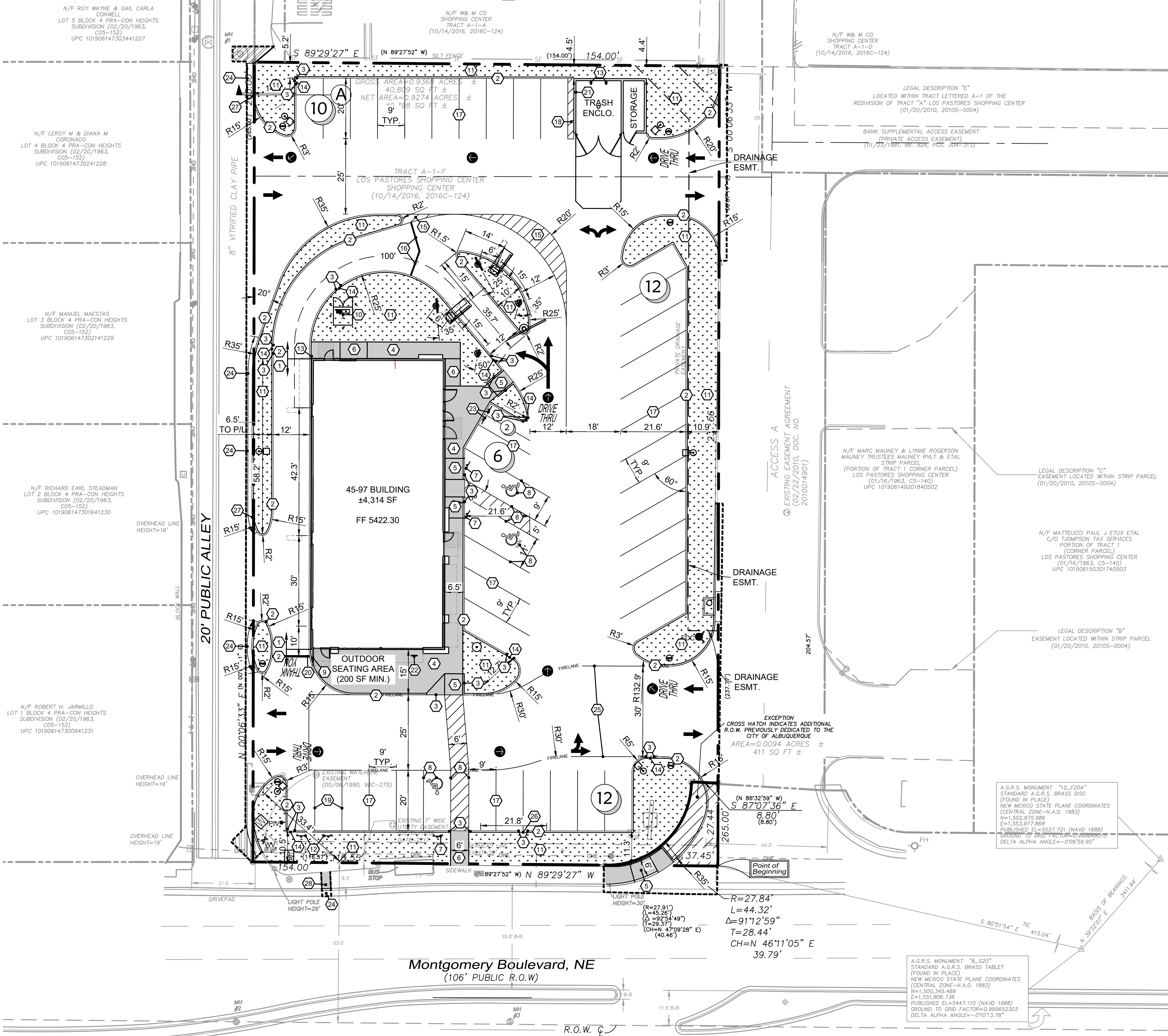
Please let us know if any further corrections are needed.

Sincerely,



Ben Betzold

Attachments: 1 (Updated Civil Plans)



STANDARD ACCESSIBILITY REQUIREMENTS

PARKING:

ACCESSIBLE PARKING SPACES SHALL BE AS NOTED TO A MIN. 96" WIDE OR A MIN. 132" WIDE FOR VAN DESIGNATED SPACES WITH A MAXIMUM SLOPE OF 2% (IN ALL DIRECTIONS). ALL BUILDINGS SHALL HAVE AT LEAST ONE VAN ACCESSIBLE SPACE.

EACH ACCESSIBLE PARKING SPACE SHALL HAVE A VERTICALLY MOUNTED (OR SUSPENDED) SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. AT LEAST ONE SPACE MUST INCORPORATE "VAN-ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY. SIGN SHALL BE LOCATED AS NOTED TO 60" (MIN.) ABOVE THE ADJACENT PAVED SURFACE TO BOTTOM OF TEXT.

ALL ACCESS AISLES SERVING ACCESSIBLE PARKING SPACES SHALL BE AS NOTED TO A 60" WIDE MINIMUM.

RAMPS:

RAMPS EXCEEDING 6" IN RISE (EXCLUDING CURB RAMPS) SHALL HAVE APPROPRIATE EDGE PROTECTION WITH HANDRAILS ON EACH SIDE AT BETWEEN 34" AND 38", AND EXTEND 12" BEYOND THE TOP AND BOTTOM OF RAMP. HANDRAIL SHALL NOT DIMINISH THE CLEAR AREA REQUIRED FOR TOP AND BOTTOM LANDINGS SERVING THE RAMPS.

IF REQUIRED BY LOCAL OR STATE JURISDICTION, RAMPS SHALL CONTAIN A TRUNCATED DOME SURFACE ARRANGED SO THAT WATER WILL NOT ACCUMULATE. COLOR OF RAMP FINISH MATERIAL (INCLUDING CONCRETE) SHALL HAVE A LIGHT AND REFLECTIVE VALUE AND MUST CONTRAST SIGNIFICANTLY TO DISTINGUISH IT FROM ADJACENT SURFACES - (OR PAINT STRIPE).

LANDINGS FOR RAMPS SHALL BE AS WIDE AS THE RAMP AND 60" LONG MINIMUM (36" MINIMUM FOR CURB RAMPS).

RAMPS SHALL NOT EXCEED A 1:12 RUNNING SLOPE OR 30° VERTICAL RISE.

RAMPS AND LANDING SHALL NOT EXCEED 1:48 (2% CROSS SLOPE).

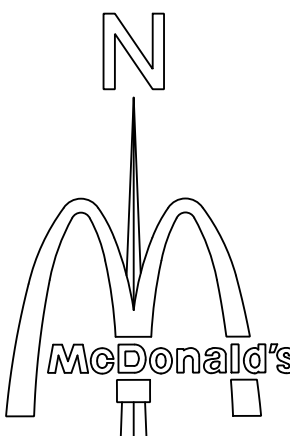
SIDEWALKS AND ACCESSIBLE ROUTES:

SIDEWALKS MUST BE AT LEAST 36" WIDE WITH A CROSS SLOPE THAT SHALL NOT EXCEED 1:48 (2%).

LONGITUDINAL SLOPE OF ANY SIDEWALK (ACCESSIBLE ROUTE) SHALL NOT EXCEED 1:20 (5%).

KEY NOTE LEGEND

MARK	MARK DESCRIPTION
①	CONCRETE VERTICAL CURB @DRIVE-THRU (RE: C10.2 STANDARD DETAILS)
②	CURB AND GUTTER @NON DRIVE-THRU AREAS (RE: C10.2 STANDARD DETAILS)
③	TURN DOWN/TRANSITION CURB (RE: C10.3 STANDARD DETAILS)
④	REINFORCED CONCRETE SIDEWALK (RE: C10.3 STANDARD DETAILS)
⑤	H.C. ACCESS RAMP @1:12 MAX SLOPE (RE: C10.1 STANDARD DETAILS)
⑥	SLOPED SIDEWALK SECTION (NOT TO EXCEED 5% SLOPE) (RE: C10.3 STANDARD DETAILS)
⑦	HANDICAP ACCESSIBLE SIGN (POLE MOUNTED) (RE: C10.1 STANDARD DETAILS)
⑧	HANDICAP ACCESSIBLE SPACES / SYMBOLS / CROSSWALK - COLOR : (PER STATE/CITY REQUIREMENTS)
⑨	GUARDRAIL @ INGRESS/EGRESS DOOR (RE: C10.1 STANDARD DETAILS)
⑩	PAD MOUNTED TRANSFORMER (RE: C9.0 UTILITY PLAN)
⑪	LANDSCAPE AREA (RE: L1.0 LANDSCAPE PLAN)
⑫	McDONALD'S OOSP SIGN (RE: C10.4 STANDARD DETAILS)
⑬	BOLLARD (RE: C10.1 STANDARD DETAILS)
⑭	2' CURB CUT
⑮	4" DIAGONAL PAINTED ISLANDS AT DRIVE-THRU - COLOR : YELLOW
⑯	6" MERGE POINT - COLOR : YELLOW
⑰	4" PARKING STALL STRIPING - COLOR : WHITE (TYP)
⑱	4" DIAGONAL PAINTED ISLANDS IN PARKING AREA - COLOR : WHITE
⑲	4" OOSP STRIPING - COLOR : YELLOW
⑳	8" OOSP STRIPING - COLOR : YELLOW
㉑	8' TALL MASONRY SCREENING WALL (RE: ARCHITECTURAL AND STRUCTURAL PLANS)
㉒	BICYCLE RACK (RE: C10.5 STANDARD DETAILS)
㉓	MOTORCYCLE PARKING SIGN (RE: C10.5 STANDARD DETAILS)
㉔	STANDARD CURB & GUTTER (RE: CITY OF ALBUQUERQUE STD. DWG. 2415A)
㉕	FIRE LANE STRIPING PER CITY OF ALBUQUERQUE STANDARDS
㉖	2.5' CURB CUT
㉗	TRANSITION CURB AT SPILLWAY (RE: C7.0 GRADING PLAN)
㉘	SIDEWALK CULVERT (RE: CITY OF ALBUQUERQUE STD. DWG. 2236)



SCALE: 1" = 20'

THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY JURISDICTIONAL ENTITIES.

OWNER INFORMATION

McDONALD'S USA, LLC
MOUNTAIN SOUTHWEST
FIELD EXECUTION TEAM
511 E. JOHN CARPENTER FRWY, STE. 375
IRVING, TX 75062
(214) 533-7382
CONTACT: LEE MORRIS

HERE WE GROW AGAIN SIGN

THE GENERAL CONTRACTOR SHALL DISPLAY A "HERE WE GROW AGAIN" BANNER DURING CONSTRUCTION. THESE BANNERS ARE AVAILABLE THROUGH ALTRUA GLOBAL SOLUTIONS. CONTACT: KRISTY FIALLO - PH# 1-800-443-6939

LEGEND

FLAG POLE	
McDONALD'S EXISTING SIGN	
LIGHT STANDARD (15' CLEAR FROM ALL OVERHEAD UTILITY LINES) (24" CLEAR FROM BACK OF CURB)	
McDONALD'S DIGITAL MENU BOARD	
McDONALD'S ORDER HERE CANOPY	
McDONALD'S DIGITAL PRE-BROWSE BOARD	
McDONALD'S DOUBLE GATEWAY	
McDONALD'S DIRECTIONAL SIGN	
DETECTOR LOOP (LOCATION TO BE APPROVED BY McDONALD'S) (RE: C10.0 STANDARD DETAILS)	
POWER POLE	
DOMESTIC WATER METER	
IRRIGATION WATER METER	
EXISTING FIRE HYDRANT	
GREASE INTERCEPTOR (RE: C9.0 UTILITY PLAN)	
"DRIVE-THRU" WITH "CIRCLE / ARROW" - COLOR : YELLOW	
"THANK YOU" AT END OF PATH - COLOR : YELLOW	
"CIRCLE / ARROW" - COLOR : YELLOW	
ARROW PATH DIRECTION - COLOR : WHITE	
DOUBLE DRIVE-THRU "ARROW MARKING" - COLOR: YELLOW	

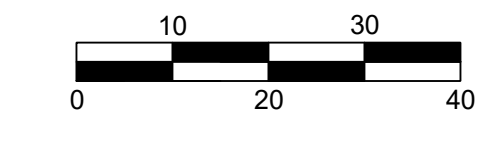
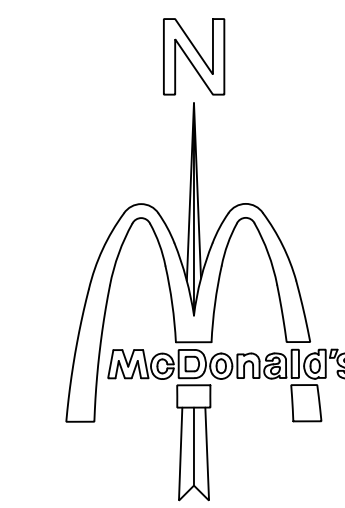
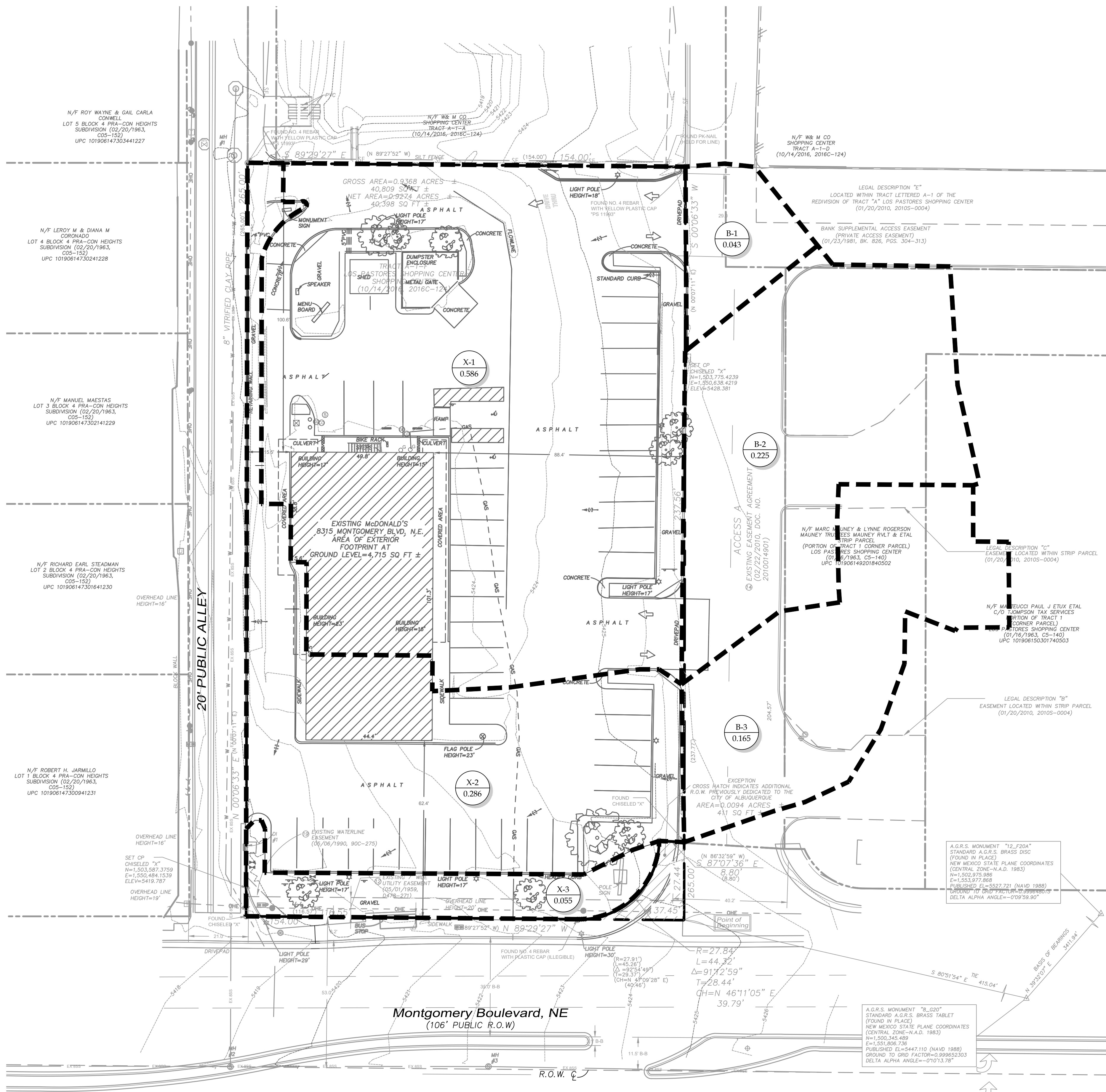
SITE INFORMATION

LAND AREA:	40,398 SF (0.927 AC)
CURRENT ZONING:	C-2
EXISTING USE:	McDONALD'S DRIVE-THRU RESTAURANT
PROPOSED USE:	McDONALD'S DRIVE-THRU RESTAURANT
BUILDING AREA (APPROXIMATE):	4,314 SF
BUILDING LOT COVERAGE:	4,314 SF/40,398 SF = 10.68%
PARKING REQUIRED:	1 SPACE PER 4 SEATS
PARKING PROVIDED:	64 SEATS/4 = 16 SPACES
HANDICAP PARKING REQUIRED:	3
HANDICAP PARKING PROVIDED:	3
MOTORCYCLE PARKING REQUIRED:	1
MOTORCYCLE PARKING PROVIDED:	2
BICYCLE PARKING REQUIRED:	2
BICYCLE PARKING PROVIDED:	2
EXISTING IMPERVIOUS AREA:	35,001 SF
PROPOSED IMPERVIOUS AREA:	33,214 SF
PROPOSED PERVIOUS AREA:	7,184 SF (17.78%)



REV	DATE	DESCRIPTION	BY
04/06/2018	04/06/2018	ISSUE FOR PERMIT	MHA
10/24/2018	10/24/2018	PER CITY COMMENTS	BMB

FILENAME: C:\PRE-DEVELOPED DRAINAGE PLAN.dwg PLOT DATE: Wednesday, October 24, 2018 PLOT TIME: 12:11:21 PM PLOTTER: VMK3 To PDF.pc3 FULL PATH: L:\projects\2016\2016.212 McDonalds - Albuquerque, NM (McGowen)\Reland\Drawings\303 Production\MC2016\484\DWG\PRE-DEVELOPED DRAINAGE PLAN.dwg



SCALE: 1" = 20'

THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY JURISDICTIONAL ENTITIES.

OWNER INFORMATION

MCDONALD'S USA, LLC
MOUNTAIN SOUTHWEST
FIELD EXECUTION TEAM
511 E. JOHN CARPENTER FRWY, STE. 375
IRVING, TX 75062
(214) 533-7382
CONTACT: LEE MORRIS

LEGEND

- DRAINAGE AREA LINE
- XXX --- EXISTING CONTOUR
- (X XXX) DRAINAGE AREA NUMBER
DRAINAGE AREA (ACRES)
- > EXISTING DRAINAGE DIRECTION

BENCHMARK

BENCHMARK 1
A.G.R.S. MONUMENT "12_F20A"
STANDARD A.G.R.S. BRASS DISC (FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES
(CENTRAL ZONE-N.A.D. 1983)
N=1,502,975.986, E=1,553,977.868
PUBLISHED EL=5527.721 (NAVD 1988)
GROUND TO GRID FACTOR= 0.999648015
DELTA ALPHA ANGLE=0°09'59.90"

BENCHMARK 1
A.G.R.S. MONUMENT "8_G20"
STANDARD A.G.R.S. BRASS TABLET (FOUND IN PLACE)
NEW MEXICO STATE PLANE COORDINATES
(CENTRAL ZONE-N.A.D. 1983)
N=1,500,345.489, E=1,551,806.736
PUBLISHED EL=5447.110 (NAVD 1988)
GROUND TO GRID FACTOR= 0.999652303
DELTA ALPHA ANGLE=0°10'13.78"



Know what's below.
Call before you dig.

PRE-DEVELOPMENT 100-YEAR, 6-HOUR RUNOFF CALCULATIONS								
Drainage Area Number	Area	Land Treatment Condition				Excess Precipitation	Volume	Peak Discharge
	(ac)	A	B	C	D	(in)	(ac-ft)	(cfs)
X-1	0.586	0.000	0.000	0.052	0.533	2.26	0.11	2.86
X-2	0.286	0.000	0.000	0.029	0.257	2.25	0.05	1.39
X-3	0.055	0.000	0.000	0.055	0.000	1.30	0.01	0.19
B-1	0.042	0.000	0.000	0.006	0.036	2.20	0.01	0.20
B-2	0.225	0.000	0.000	0.034	0.191	2.20	0.04	1.08
B-3	0.165	0.000	0.000	0.025	0.140	2.20	0.03	0.79
Total	1.358	0.000	0.000	0.201	1.158	2.20	0.14	6.50
Note: Calculations in accordance with the City of Albuquerque Development Process Manual. The site is in Precipitation Zone 3.								

Note: Calculations in accordance with the City of Albuquerque Development Process Manual. The site is in Precipitation Zone 3.

ADAMS JOB NO.: 2016.212

Adams

8951 Cypress Waters Blvd Suite 150 ■ Dallas, Texas 75019 ■ (817) 338-3200

REV	DATE	DESCRIPTION
04/06/2018	04/06/2018	ISSUE FOR PERMIT
10/24/2018	10/24/2018	PER CITY COMMENTS

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW, AGENCY APPROVAL, AND COMMENT UNDER THE AUTHORITY OF G. ROBERT ADAMS, P.E. REGISTRATION NO. 5142, ON 10/24/18 THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES

OFFICE	MTN. SOUTHWEST FIELD EXECUTION TEAM	MCDONALD'S U.S. 30-0031
ADDRESS	KROC DRIVE - OAK BROOK, ILLINOIS 60521	
DATE		
SIGNATURE (2 REQUIRED)		
REGIONAL MGR.		
CONST. MGR.		
OPERATIONS DEPT.		
REAL ESTATE DEPT.		
CO-SIGN SIGNATURES		
CONTRACTOR		
OWNER		

McDonald's USA, LLC

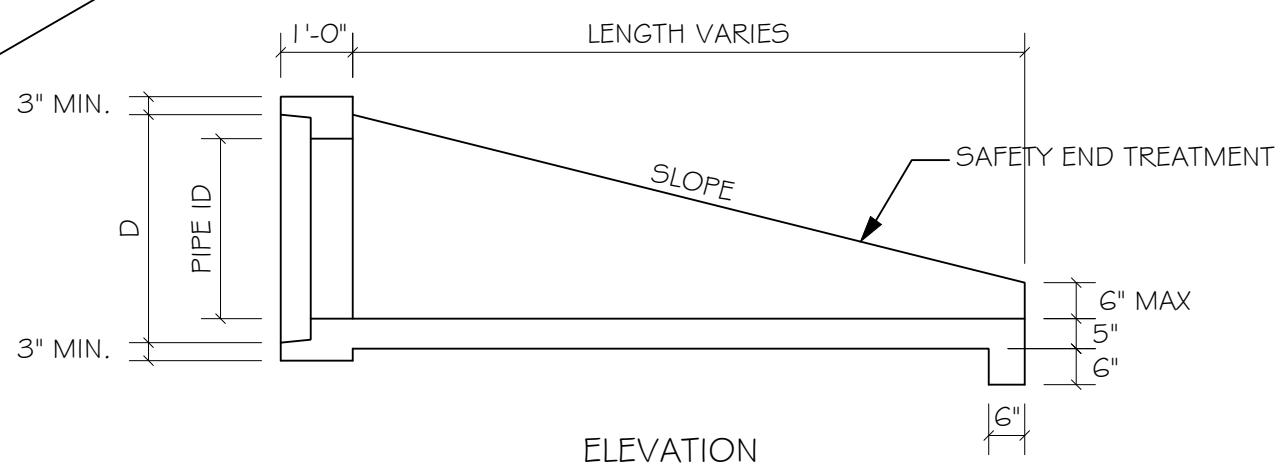
These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be reproduced, copied, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission of McDonald's USA, LLC. The use of these drawings for reference or example on another project requires the services of properly licensed architects and engineers. Reproduction of the contract documents for use on another project is not authorized.

8315 MONTGOMERY BLVD. NE
ALBUQUERQUE, NM

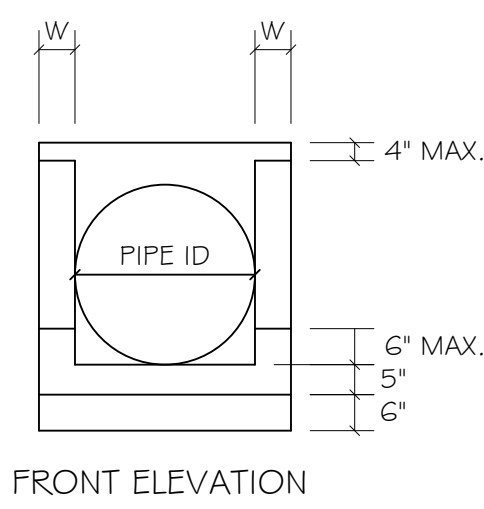
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TJR	MAR 2018	TJR
DRAWN	DATE	BY
TJR	MAR 2018	TJR
CHECKED	DATE	BY
DWL	04/04/2018	DWL
AS-BUILT	DATE	BY

PRE-DEVELOPED DRAINAGE PLAN

C8.0

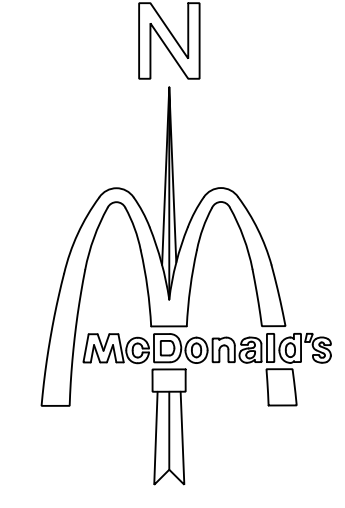
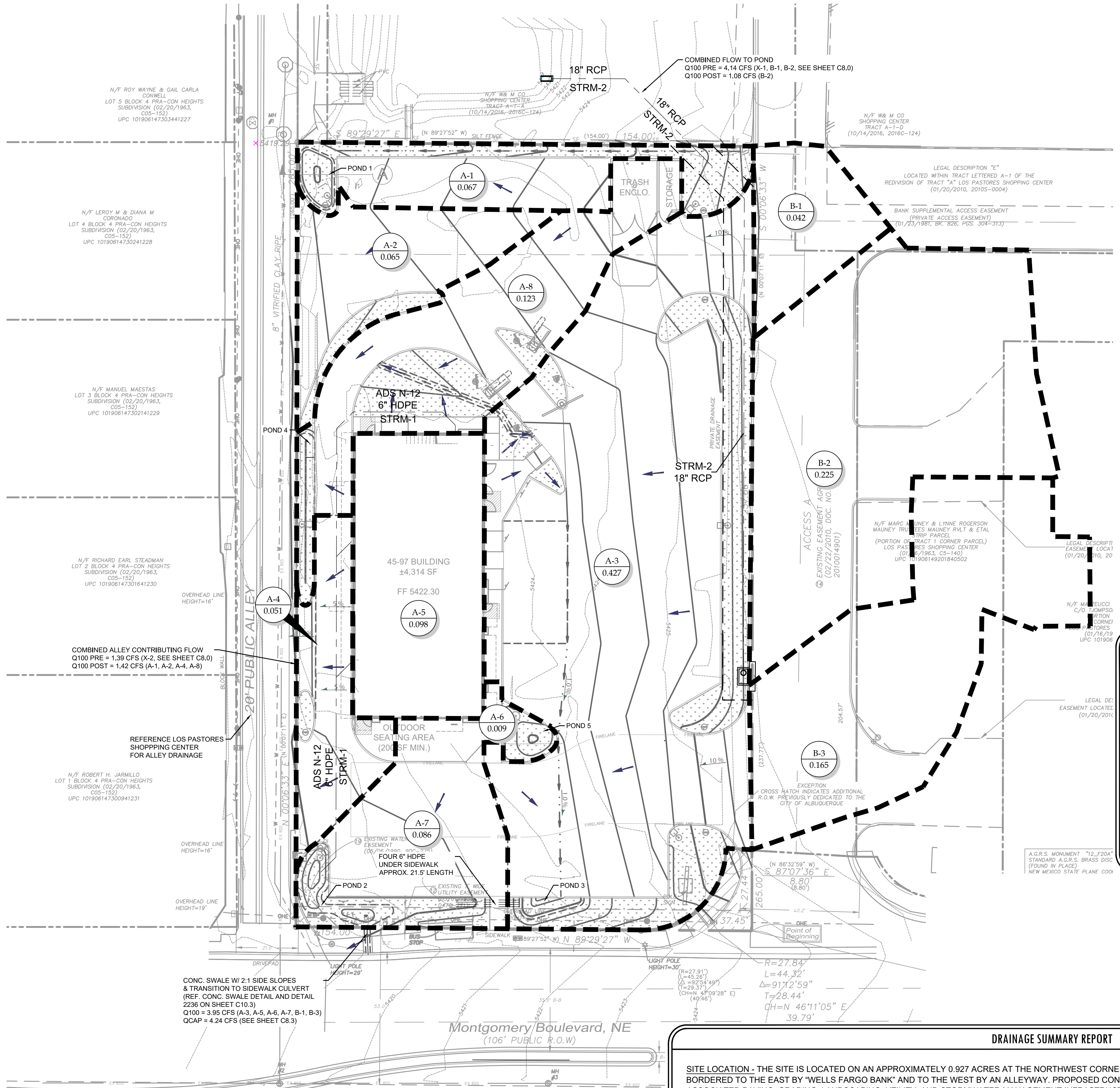


N.T.S.



- NOTES:
1. 4500 PSI CONCRETE
 2. #4 GRADE 60 REBAR 9" O.C.E.W.
 3. ALL EXPOSED CORNERS ARE CHAMFERED 3/4"
 4. SWIFT LIFT ANCHORS, LOCATED IN THE FLOOR, SHALL BE USED FOR HANDLING.
 5. GALVANIZED STEEL PIPE RUNNERS ARE AVAILABLE FOR CROSS AND PARALLEL DRAINAGE APPLICATIONS.

PIPE ID	PIPE OD	SLOPE	D	W
18"	23"	3:1	24"	5"
		4:1		
		6:1		








SCALE: 1" = 20'

THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY
JURISDICTIONAL ENTITIES.

OWNER INFORMATION

MCDONALD'S USA, LLC
MOUNTAIN SOUTHWEST
FIELD EXECUTION TEAM
511 E. JOHN CARPENTER FRWY, STE. 375
IRVING, TX 75062
(214) 533-7382
CONTACT: LEE MORRIS

LEGEND

- | | |
|---|---|
|  | DRAINAGE AREA LINE |
|  | EXISTING CONTOUR |
|  | PROPOSED CONTOUR |
|  | DRAINAGE AREA NUMBER
DRAINAGE AREA (ACRES) |
|  | PROPOSED DRAINAGE DIRECTION |

BENCHMARK

ENCHMARK 1
 A.G.R.S. MONUMENT "12 F20A"
 STANDARD A.G.R.S. BRASS DISC (FOUND IN PLACE)
 NEW MEXICO STATE PLANE COORDINATES
 (CENTRAL ZONE-N.A.D. 1983)
 N=1,502,975.986 E=1,553,877.868
 DELTA ALPHA ANGLE=5527.721 (NAVD 1988)
 GROUND TO GRID FACTOR= 0.999648015
 DELTA ALPHA ANGLE="0°09'59.90"

ENCHMARK 1
 A.G.R.S. MONUMENT "B G20"
 STANDARD A.G.R.S. BRASS TABLET (FOUND IN PLACE)
 NEW MEXICO STATE PLANE COORDINATES
 (CENTRAL ZONE-N.A.D. 1983)
 N=1,500,345.489 E=1,551,806.736
 DELTA ALPHA ANGLE=5447.110 (NAVD 1988)
 GROUND TO GRID FACTOR= 0.999652303
 DELTA ALPHA ANGLE="0°10'13.78"



now what's below.
Call before you dig.

DRAINAGE SUMMARY REPORT

LOCATION: THE SITE IS LOCATED ON AN APPROXIMATELY 0.927 ACRES AT THE NORTHWEST CORNER OF MONTGOMERY BLVD. S.E. AND WYOMING BLVD. S.E. THE SITE IS BOUND TO THE EAST BY "WELLS FARGO BANK" AND TO THE WEST BY AN ALLEYWAY. PROPOSED CONSTRUCTION WILL INCLUDE A MCDONALD'S RESTAURANT AND ASSOCIATED PAVING, GRADING, LANDSCAPING, UTILITY, AND STORMWATER MANAGEMENT INFRASTRUCTURE.

METHODOLOGY: THE PROPOSED STORMWATER MANAGEMENT SYSTEM WAS EVALUATED ACCORDING TO CHAPTER 22 OF THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL. THE SITE IS IN PRECIPITATION ZONE 3. THE 100-YEAR, 6-HOUR FREQUENCY RAINFALL EVENT WAS USED TO CALCULATE PEAK DISCHARGE RATES AND RUNOFF VOLUMES UNDER EXISTING AND PROPOSED CONDITIONS.

EXISTING CONDITIONS: REFER TO SHEET C8.0 FOR THE PRE-DEVELOPED DRAINAGE PLAN FOR THIS SITE. STORMWATER RUNOFF GENERALLY DRAINS NORTHWARD TOWARDS THE DETENTION POND OR SOUTHWEST ACROSS THE SITE UNDER EXISTING CONDITIONS. SHEET C8.0 IDENTIFIES SIX DRAINAGE DIVIDES FOR THIS SITE. AREA X-1 CONSISTS OF 586 ACRES FLOWING OFFSITE TO THE DETENTION POND, AREA X-2 CONTAINS 0.286 ACRES DRAINING SOUTHWEST TO THE ADJACENT ALLEY, AND AREA X-3 CONTAINS 0.055 ACRES DRAINAGE SOUTH TO MONTGOMERY BLVD. OFFSITE AREAS B-1 (0.043 AC) AND B-2 (0.225 AC) DRAIN ONTO X-1. AREA B-3 (0.165) DRAINS ONTO X-2. PEAK DISCHARGE RATE AND RUNOFF VOLUME CALCULATIONS FOR EXISTING CONDITIONS ARE PROVIDED ON SHEET C8.0.

PROPOSED CONDITIONS: REFER TO SHEET C8.1 FOR THE POST-DEVELOPED DRAINAGE PLAN. ELEVEN DRAINAGE BASINS ARE IDENTIFIED UNDER PROPOSED CONDITIONS. AREA A-1 (0.067 AC) DRAINS INTO POND 1 AND ULTIMATELY TO THE ALLEY TO THE WEST. AREAS A-5 (0.098 AC), A-6 (0.009 AC), A-7 (0.086 AC), AND A-8 (0.123 AC) ALL FILTER THROUGH FIRST FLUSH POUNDS BEFORE FLOWING OFFSITE. REFER TO SHEET C8.1 TO SEE THE DRAINAGE BASINS AND CORRESPONDING FIRST FLUSH POUNDS. AREA B-1 (0.042 AC) AND B-3 (0.165 AC) DRAIN ONTO A-3, THEN FLOW PASSES TO FIRST FLUSH POND 3. THEN TO POND 2 AND ULTIMATELY TO MONTGOMERY BLVD. N.E. AREA B-2 (0.225 AC) IS CAPTURED BY CURB INLET AND IS PIPED DIRECTLY TO THE OFFSITE DETENTION POND. THE TOTAL SITE GENERATED FLOW OF 4.39 CFS AT THE 100-YEAR STORM EVENT IS LESS THAN THE EXISTING FLOW OF 4.44 CFS. TOTAL REQUIRED FIRST FLUSH VOLUME (0.28") IS 716 CUBIC FEET WITH AN OVERALL TOTAL PROPOSED STORAGE OF 442 CUBIC FEET.

CONCLUSIONS: THE OVERALL AMOUNT OF IMPERVIOUS AREA AT THIS SITE WILL BE SIMILAR UNDER THE PROPOSED CONDITIONS AS THE EXISTING SITE. HOWEVER, WATER FLOWING THROUGH THE SITE DRAINS TO FIRST FLUSH POUNDS BEFORE EXITING. FURTHER, UNDER SMALLER STORM EVENTS, A LARGE PORTION OF FLOW IS RETAINED AND INFILTRATED ON-SITE WHILE EVEN THE 100-YEAR STORM FLOWS OFF THE SITE ARE KEPT BELOW EXISTING VOLUMETRIC FLOW RATE. THOUGH THE DIRECT FLOW TO THE ALLEY IS SLIGHTLY INCREASED BY 0.03 CFS, THE OVERALL CONTRIBUTION TO THE ALLEY DECREASES BY 3.03 CFS. BECAUSE OF THE IMPROVEMENTS, QUALITY AND QUANTITY OF FLOW IS IMPROVED WHEN COMPARED TO THE EXISTING SITE.

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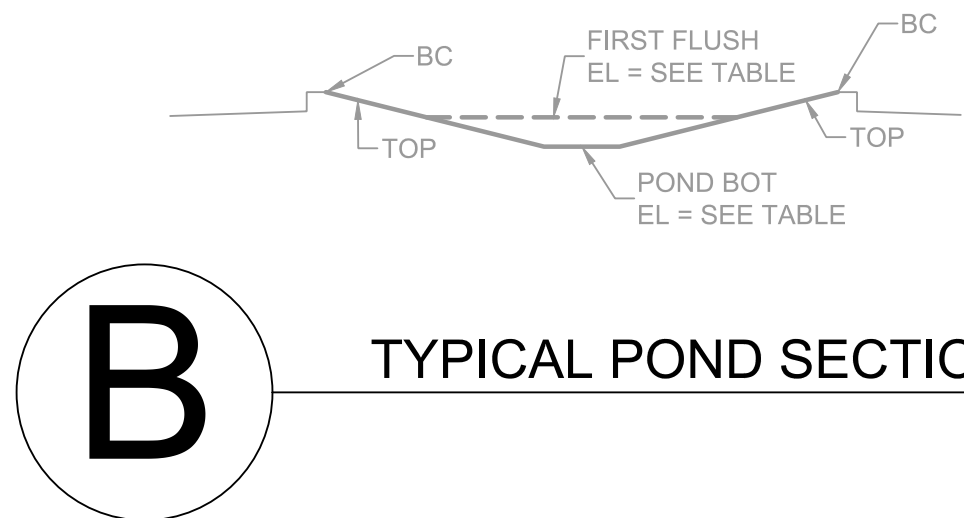
THIS DOCUMENT IS RELEASED FOR
THE PURPOSE OF INTERIM REVIEW,
AGENCY APPROVAL, AND COMMENT
UNDER THE AUTHORITY OF
G. ROBERT ADAMS, P.E.
REGISTRATION No. 15142, ON 10/24/18
THIS DOCUMENT IS NOT
TO BE USED FOR
CONSTRUCTION PURPOSES

PLAN APPROVALS		OFFICE		30-0031	
SIGNATURE (2 REQUIRED)		DATE		30-0031	
REGIONAL MGR.				30-0031	
CONST. MGR.				30-0031	
OPERATIONS DEPT.				30-0031	
REAL ESTATE DEPT.				30-0031	
CO-SIGN SIGNATURES				30-0031	
CONTRACTOR				30-0031	
OWNER				30-0031	

	DATE	BY
DESIGNED	MAR 2018	TJR
DRAWN	MAR 2018	TJR
CHECKED	04/04/2018	DWL
AS-BUILT		

POST-DEVELOPED DRAINAGE PLAN

C8.1



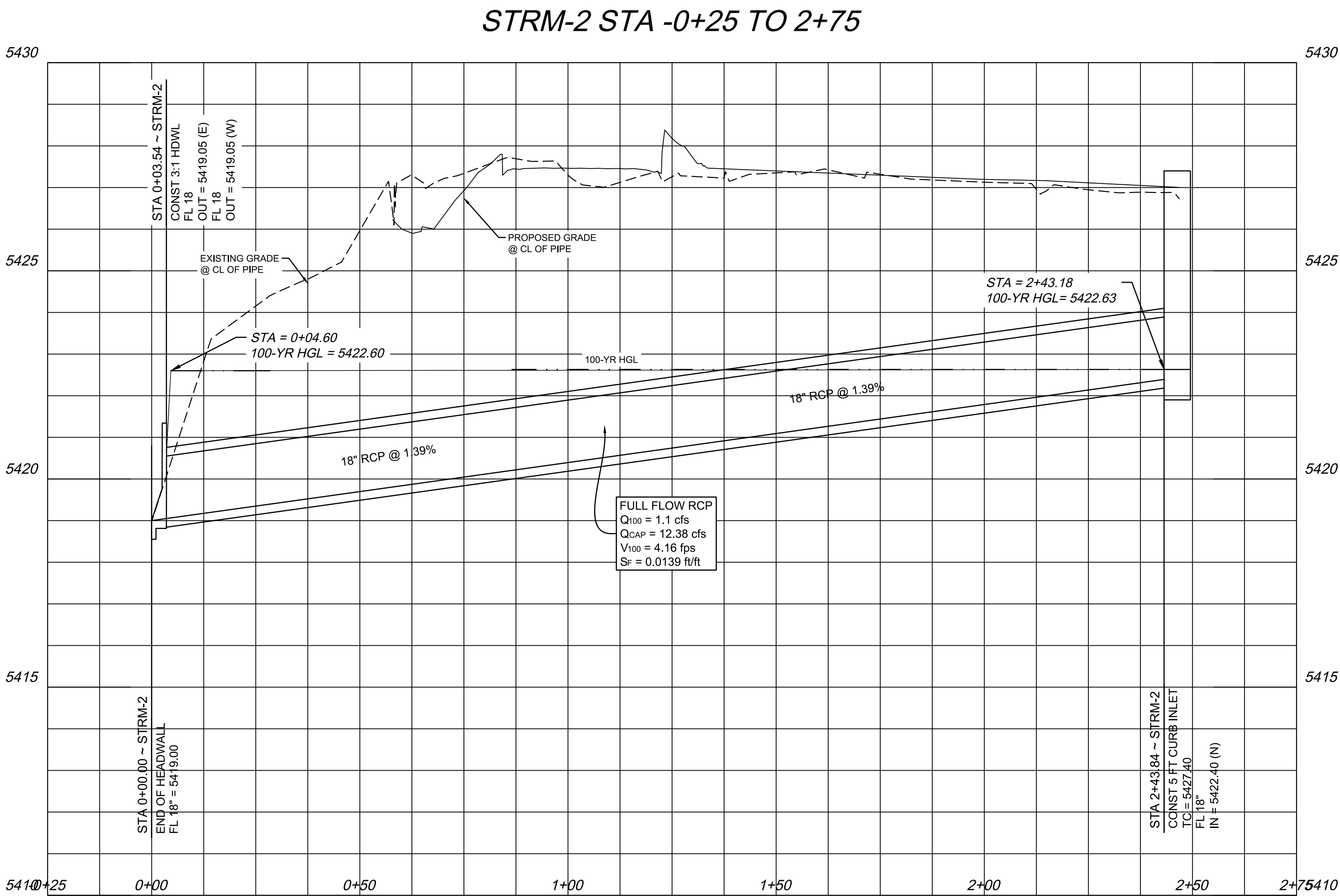
POND FF ELEVATION TABLE			
Pond #	POND BOT	POND TOP	FIRST FLUSH ELEVATION*
1	5419.95	5421.21	5420.68
2	5418.50	5419.40	5420.08
3	5418.50	5420.35	*
4	5420.00	5420.68	*
5	5419.95	5421.00	*

FIRST FLUSH VOLUME CALCULATIONS		
	SF / CF	ac / ac-ft
Total On-site Impervious Area =	33050.42	0.759
Required Retention Volume (0.26"/acre) =	716	0.016
Retention Volume Provided =	442	0.010

FIRST FLUSH VOLUME CALCULATIONS				
Pond #	Drainage Areas	Impervious Area (Ac)	FF Required Volume (cf)	FF Provided Volume (cf)
1	A-1	0.037	35	105
2	A-5, A-7	0.167	157	131
3	A-3	0.353	334	83
4	A-8	0.092	87	76
5	A-6	0.003	3	48
Off-Site	A-2, A-4	0.107	101	-
Total	All	0.759	716	442

Drainage Area Number	Area (ac)	Land Treatment Condition				Excess Precipitation (in)	Volume (acR)	Peak Discharge (cfs)
		A	B	C	D			
A-1	0.067	0.000	0.000	0.030	0.037	1.88	0.01	0.29
A-2	0.065	0.000	0.000	0.007	0.058	2.24	0.01	0.31
A-3	0.427	0.000	0.000	0.073	0.353	2.18	0.08	2.03
A-4	0.051	0.000	0.000	0.002	0.049	2.32	0.01	0.25
A-5	0.098	0.000	0.000	0.000	0.098	2.36	0.02	0.49
A-6	0.009	0.000	0.000	0.006	0.003	1.64	0.00	0.04
A-7	0.086	0.000	0.000	0.018	0.069	2.14	0.02	0.41
A-8	0.123	0.000	0.000	0.031	0.092	2.09	0.02	0.57
B-1	0.042	0.000	0.000	0.006	0.036	2.20	0.01	0.20
B-2	0.225	0.000	0.000	0.034	0.191	2.20	0.04	1.08
B-3	0.165	0.000	0.000	0.025	0.140	2.20	0.03	0.79
Total	1.358	0.000	0.000	0.232	1.126	2.18	0.25	6.45

Note: Calculations in accordance with the City of Albuquerque Development Process Manual. The site is in Precipitation Zone 3.



"FIRST FLUSH" POND 1 STAGE-STORAGE VOLUME				
Elevation	Area	Inc. Depth	Inc. Volume	Total Volume
	(sq. ft.)	(ft.)	(cu. Ft.)	(cu. ft.)
5419.95	0.0			0.0
		0.1	0.2	
5420.00	9.6			0.2
		1.0	67.5	
5421.00	154.5			67.7
		0.2	36.9	
5421.21	198.4			104.6
"FIRST FLUSH" POND 2 STAGE-STORAGE VOLUME				
Elevation	Area	Inc. Depth	Inc. Volume	Total Volume
	(sq. ft.)	(ft.)	(cu. Ft.)	(cu. ft.)
5418.50	27.9			0.0
		0.5	39.9	
5419.00	147.3			39.9
		0.4	90.6	
5419.40	316.6			130.5
"FIRST FLUSH" POND 3 STAGE-STORAGE VOLUME				
Elevation	Area	Inc. Depth	Inc. Volume	Total Volume
	(sq. ft.)	(ft.)	(cu. Ft.)	(cu. ft.)
5418.50	2.2			0.0
		0.5	4.2	
5419.00	16.8			4.2
		1.0	44.9	
5420.00	80.9			49.1
		0.4	33.4	
5420.35	110.5			82.5
"FIRST FLUSH" POND 4 STAGE-STORAGE VOLUME				
Elevation	Area	Inc. Depth	Inc. Volume	Total Volume
	(sq. ft.)	(ft.)	(cu. Ft.)	(cu. ft.)
5420.00	0.0			0.0
		0.7	75.8	
5420.68	334.4			75.8

[illegible]

DESIGNED		MAR 2018		TJR	
DRAWN		MAR 2018		TJR	
CHECKED		04/04/2018		DWL	
AS-BUILT					
DRAINAGE CALCULATIONS					
C8.2					

PLAN APPROVALS		OFFICE		MTN. SOUTHWEST FIELD EXECUTION TEAM		McDONALD'S U.C. 30-0031	
SIGNATURE (2 REQUIRED)		DATE		ADDRESS		KROC DRIVE - OAK BROOK, ILLINOIS 60521	
REGIONAL MGR.				M _o McDonald's USA, LLC			
CONST. MGR.				These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared for use on this specific site in conjunction with its issued state and are not suitable for use on a different site or at a later time. Use on any other project without the express written consent of McDonald's USA, LLC is prohibited. Reproduction of the contract documents for reuse on another project is not authorized.			
OPERATIONS DEPT.				CO-SIGN SIGNATURES			
REAL ESTATE DEPT.							
CONTRACTOR				8315 MONTGOMERY BLVD. NE			
OWNER				ALBUQUERQUE, NM			

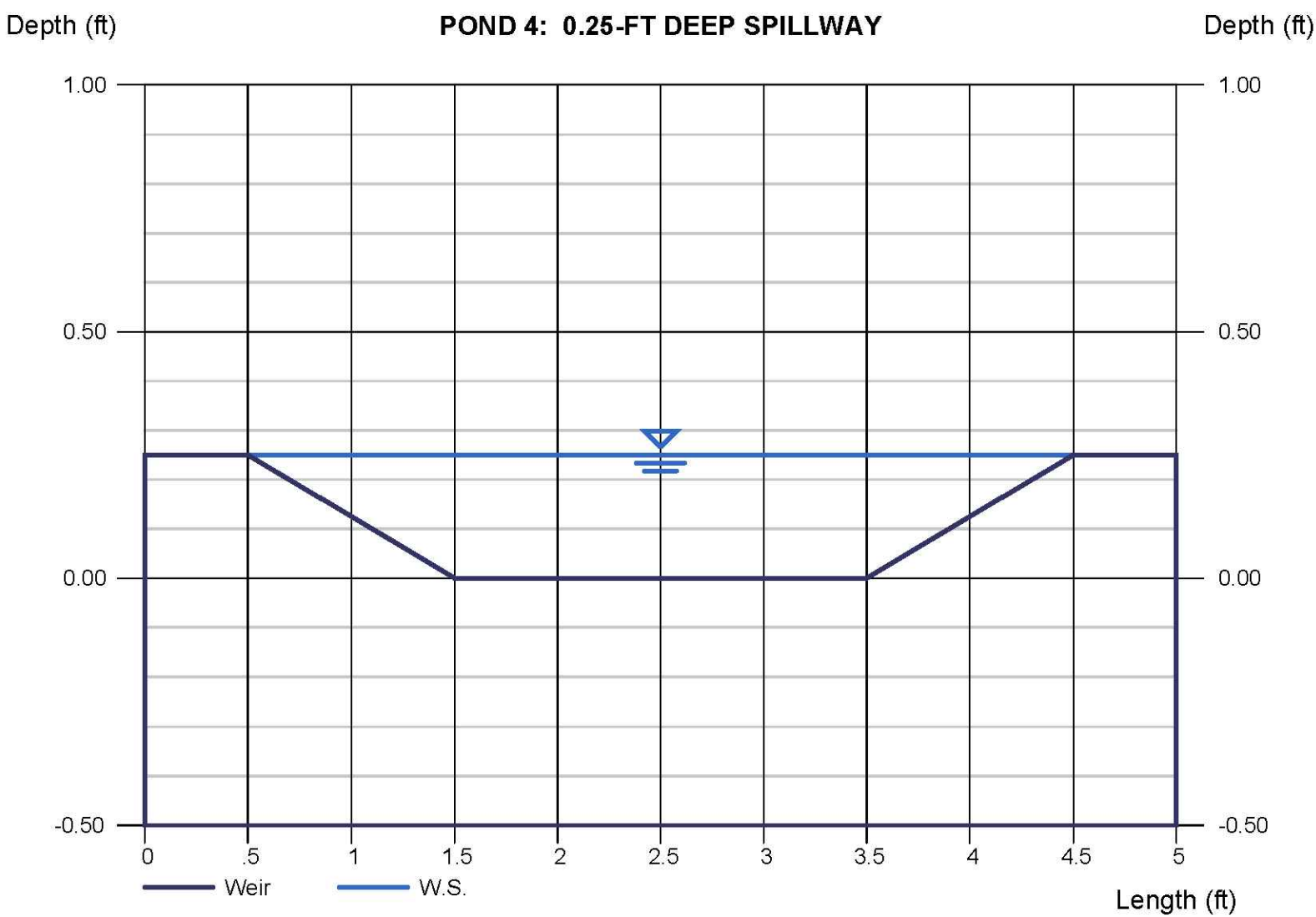
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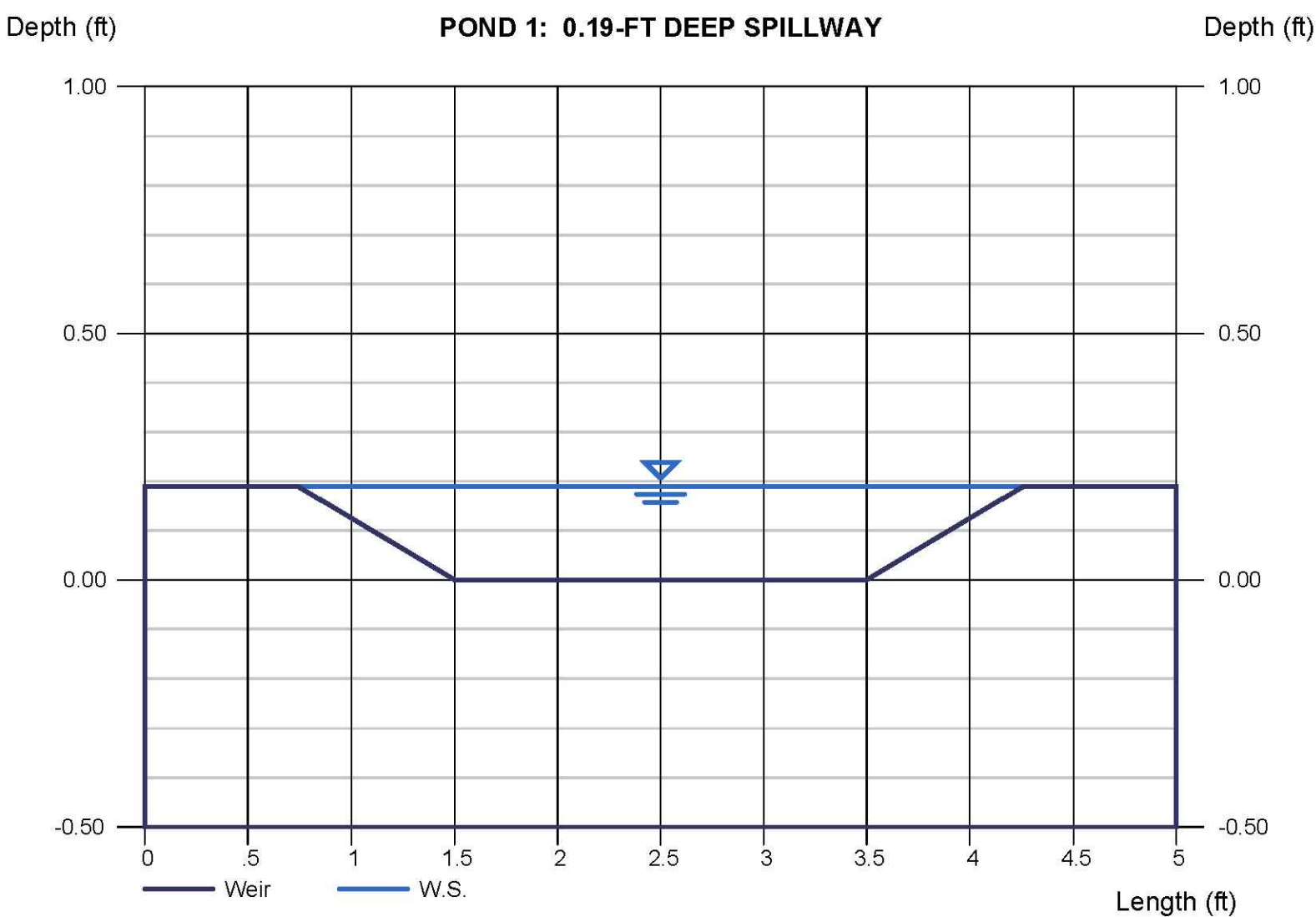
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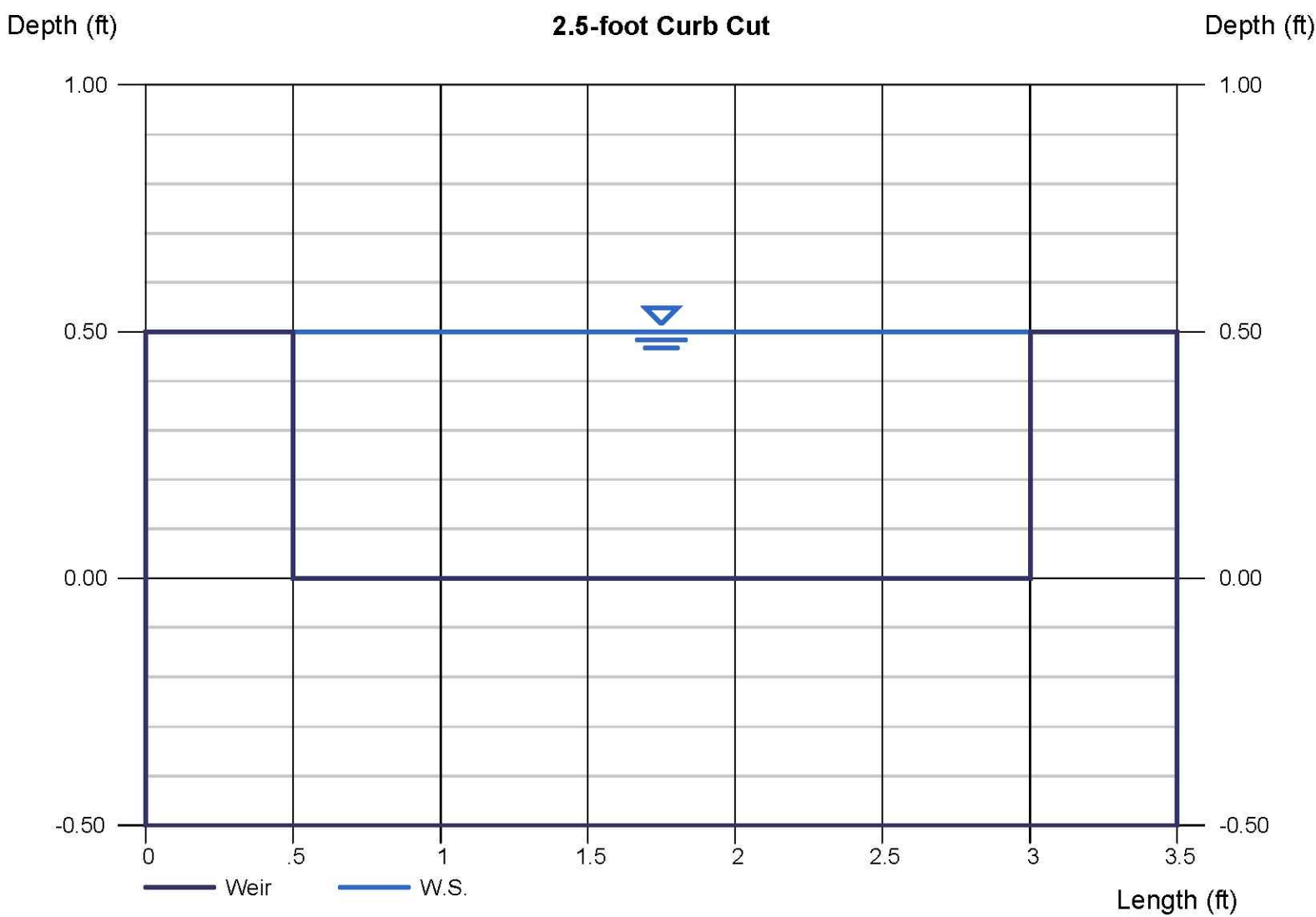
Friday, Aug 10 2018



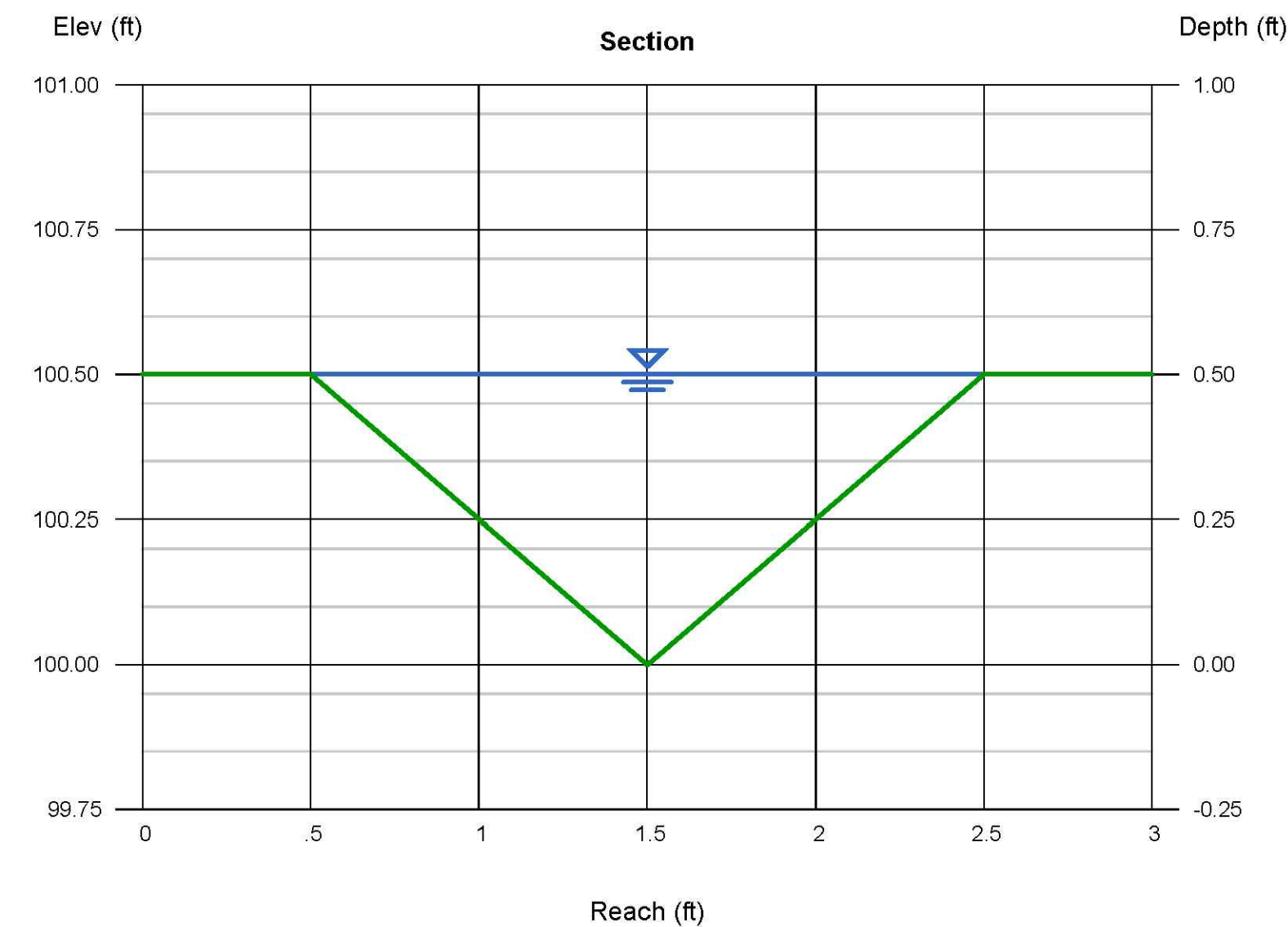
Friday, Aug 10 2018



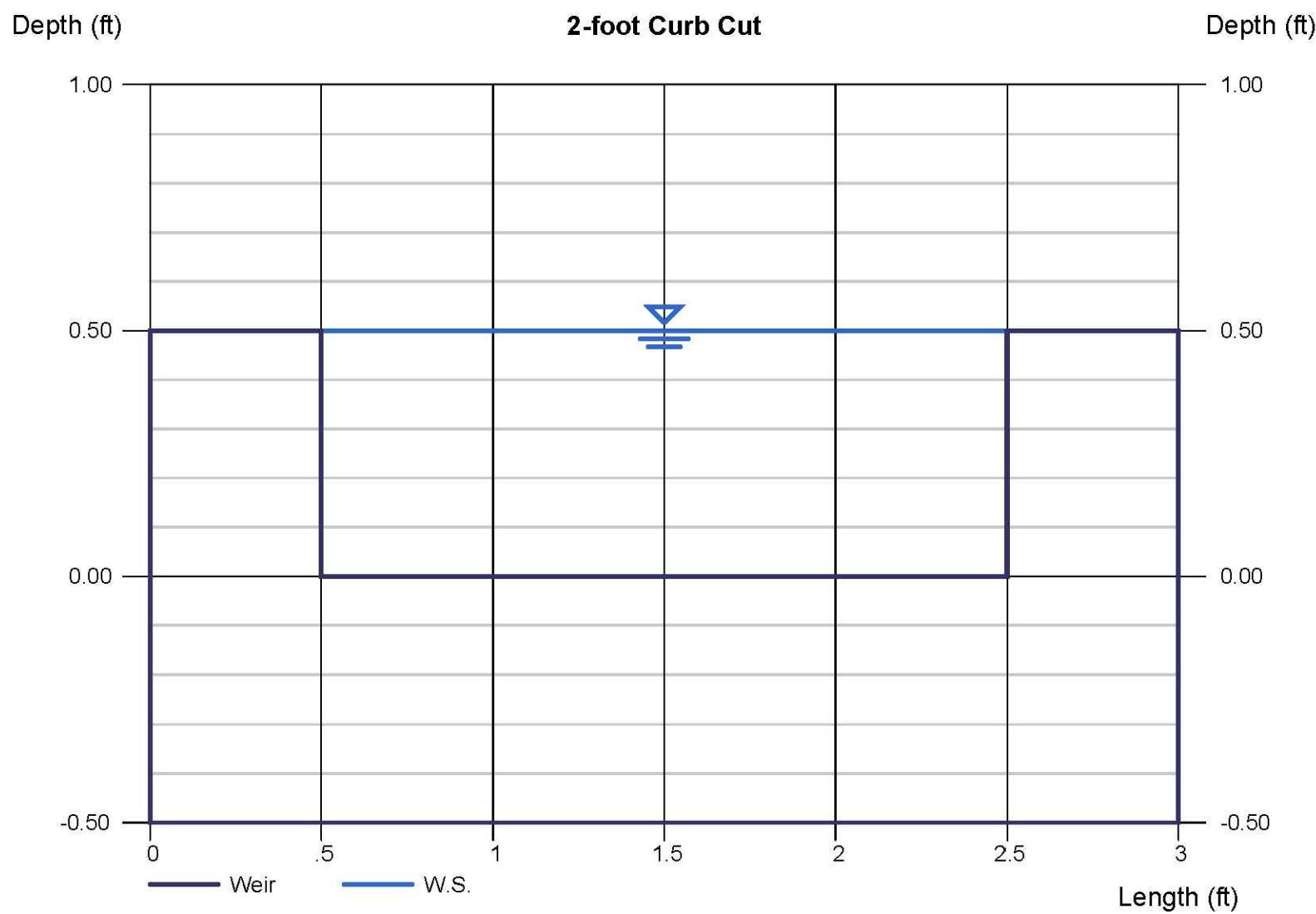
Friday, Aug 10 2018



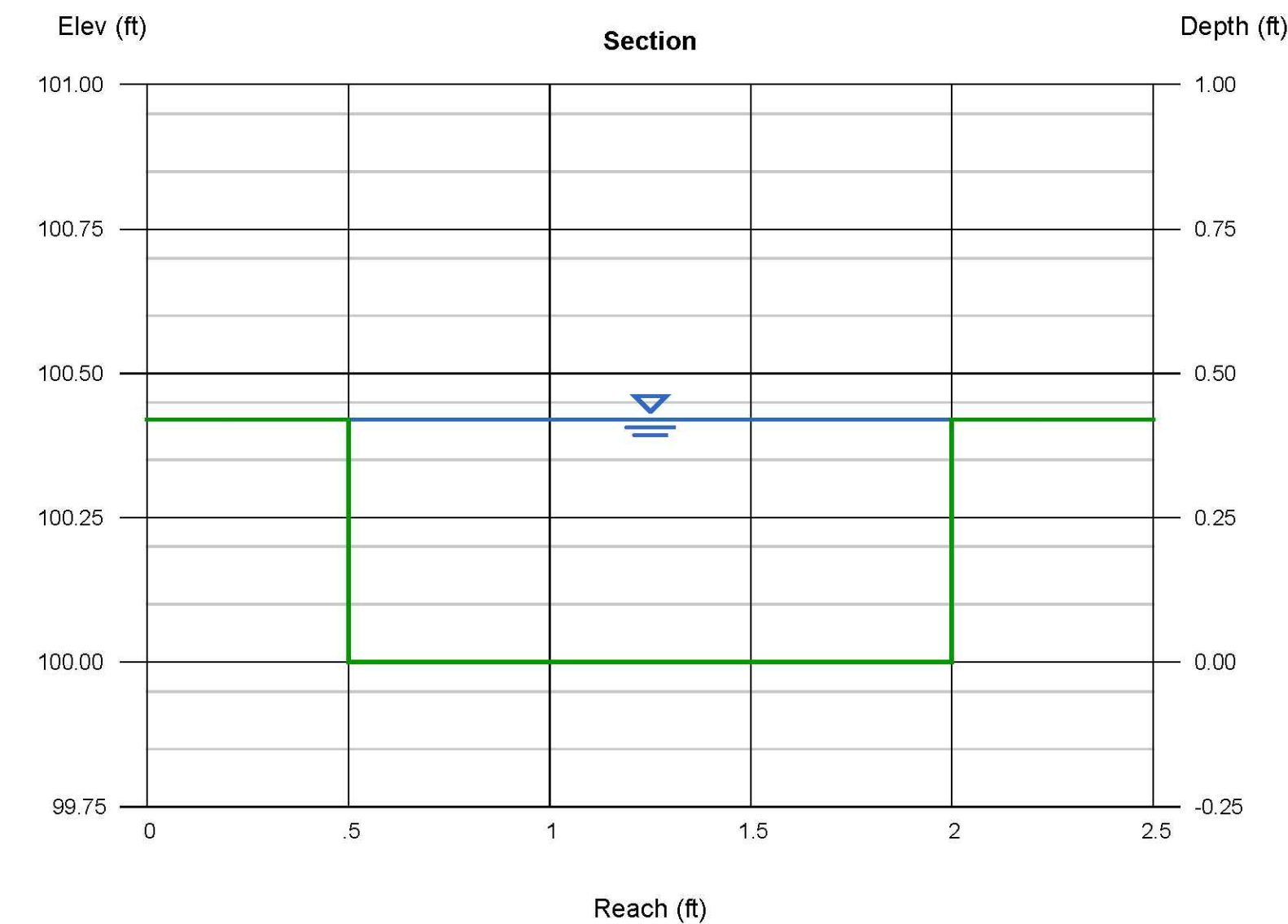
Friday, Aug 10 2018



Friday, Aug 10 2018

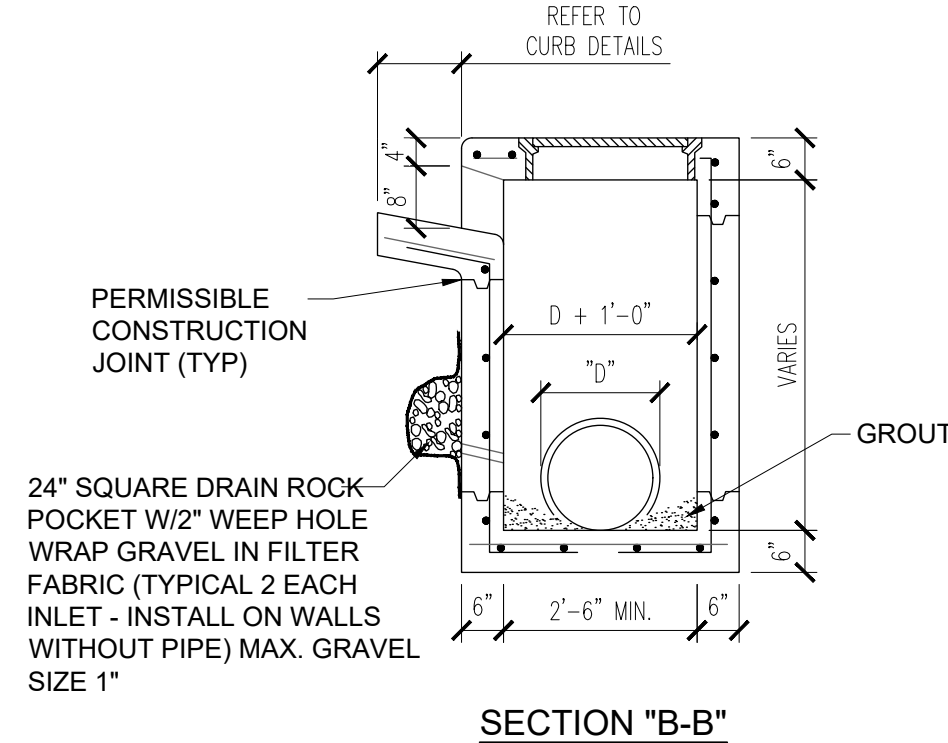


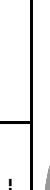
Friday, Aug 10 2018



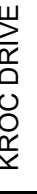
C8.3

1. VERIFY CONDUIT SIZES AND LAYOUT WITH DETECTOR LOOP MANUFACTURER.
2. CENTER VEHICLE DETECTOR LOOP IN DRIVE THRU LANE. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
3. NO STEEL (REBAR OR ELECTRICAL WIRE) SHALL BE USED WITH 2" OF LOOP.
4. DETECTOR LOOP MANUFACTURERS:
DETECTOR LOOPS MAY BE BY ONE OF THE FOLLOWING COMPANIES OR EQUAL.
3M: 1-800-328-0033
HME: 1-800-848-4468
5. DETECTOR LOOP MATERIAL:
PVC TUBING 1/2" I.D. 100 PSI LOOP SHALL BE FROM ONE LENGTH OF THIN FORTEN GAUGE STRANDED WIRE. LEADS IS TWISTED AT FACTORY.
6. DETECTOR LOOP CONSTRUCTION:
FORMED WITH ONE CONTINUOUS LENGTH OF PVC WITH NO SHARP CORNERS AS DETAILED. WIRE LOOPED, FORMED, & PIGTAILED AS DETAILED.



		8951 Cypress Waters Blvd., Suite 150 ■ Dallas, Texas 75209 ■ (817) 328-3200	
REV	DATE	DESCRIPTION	BY
04/06/2018	10/24/2018	ISSUE FOR PERMIT	MHA
		PER CITY COMMENTS	BMB
		ADAMS JOB NO.: 2016.212	

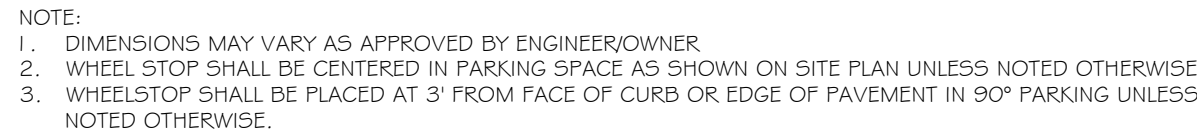
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PLAN APPROVALS		OFFICE	MTN. SOUTHWEST FIELD EXECUTION TEAM	McDONALD'S LIC: 39-0031
		ADDRESS	KROC DRIVE - OAK BROOK, ILLINOIS 60521	
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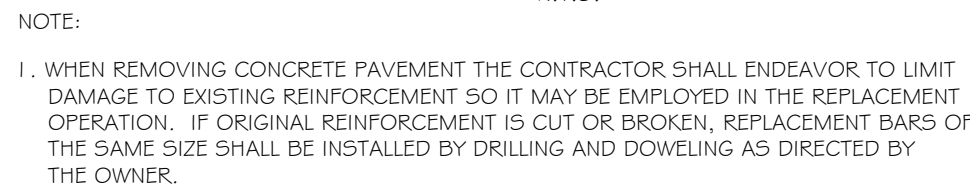
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STANDARD DETAILS

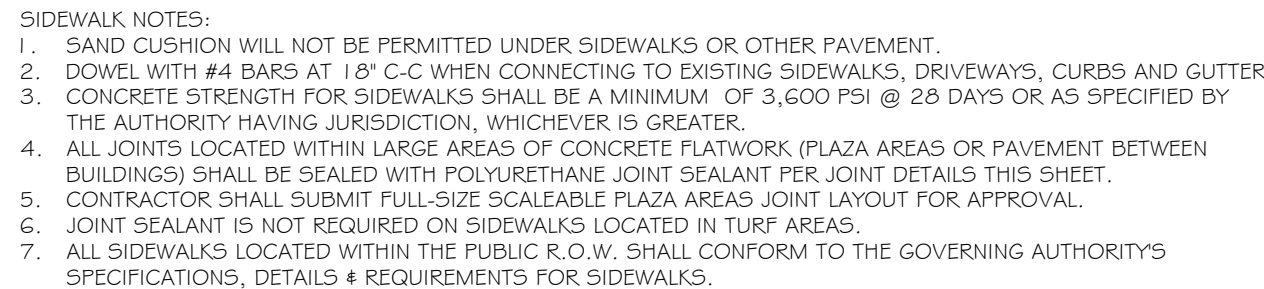
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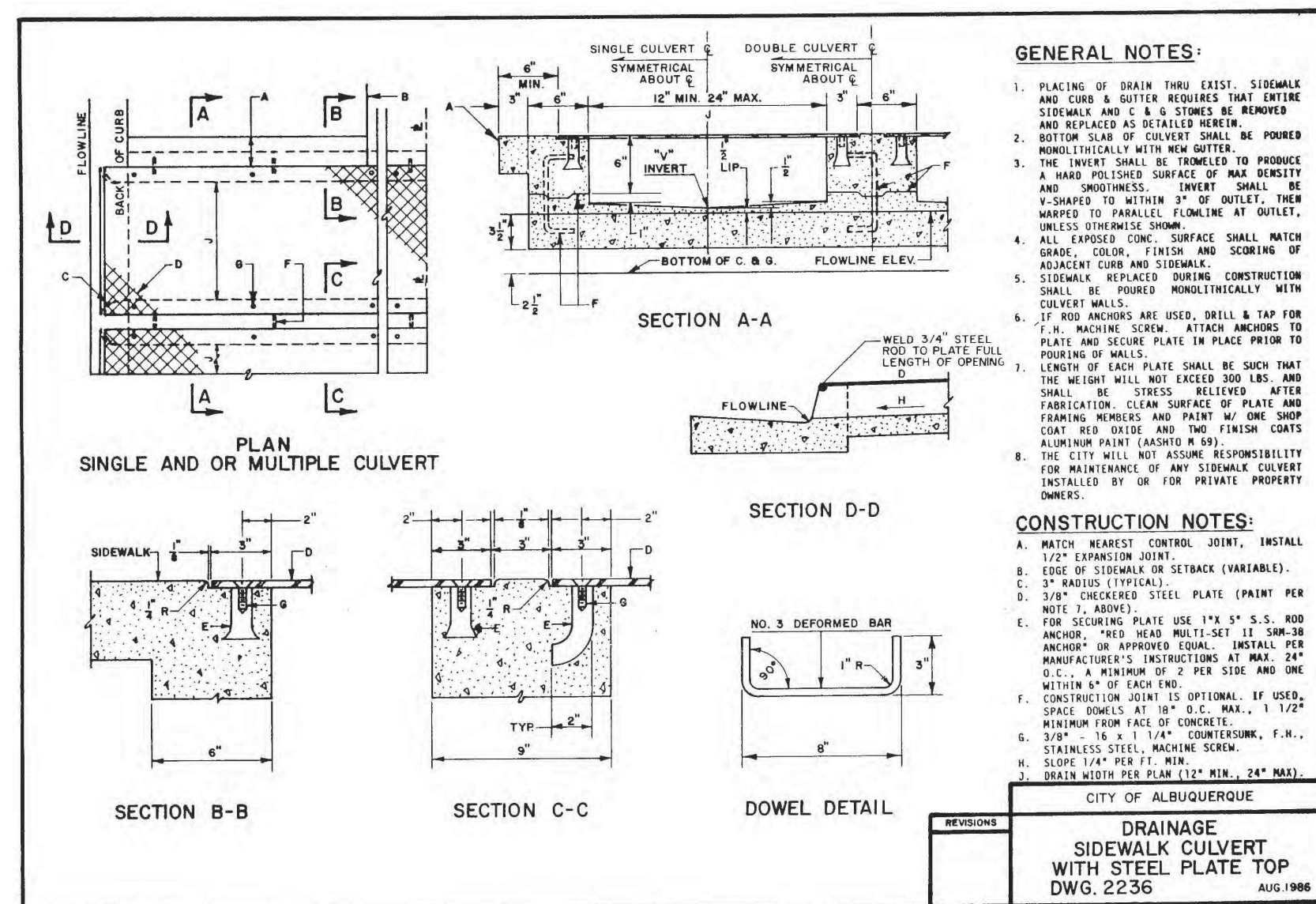


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SIDEWALK PANEL SCHEDULE		
SIDEWALK WIDTH = W (FT.)	SIDEWALK THICKNESS = T (IN.)	JOINT SPACING = L (FT.)
4	4	4
5	4	5
6	4	5
7	5	7
8	5	8
9	5	9
10	5	10

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STANDARD DETAILS

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