conditions, while Land Treatment Condition D was used for all impervious areas. Flow from the

6" on center each way. The top of the riser will act as an emergency spillway during less

Conclusions – Storm water runoff rarely leaves the site via surface runoff under existing

six hours of drawdown time following the first 100-year, 6-hour event.

4310

4310

4310

4310

4310

4310

management system.

4959.0

4960.0

4963.0

detention area will be through a 12 diameter perforated riser pipe, with 1" perforations spaced at

frequent storm events. The detention area discharge pipe will be connected to an existing curb

inlet in the north side of the I-40 frontage road. The volume in the detention area is sufficient to

contain the total contributing runoff volume from a second 100-year, 6-hour storm event given

conditions. Under proposed conditions, storm water runoff from the site is routed through the

detention area, and the vast majority of storm events will only exit the detention area through the 1" diameter perforations in the riser pipe. The detention area and riser discharge

configuration will cause the peak discharge from the detention area to be attenuated. As such it will occur after the normal peak inflow from the contributing drainage area to the existing curb

inlet to which the outfall pipe is connected. Therefore, with detention of proposed storm water

runoff from the site, this development will have no adverse impact on the existing storm water

DETENTION AREA STAGE-STORAGE TABLE

0.5

1.5

3.5

4.5

100-YR., 6-HR. INFLOW VOLUME = 0.31 AC-FT

DETENTION VOLUME PROVIDED = 0.45 AC-FT

DESIGN HIGH WATER ELEVATION = 4961.63

100-YR., 6-HR. PEAK INFLOW = 8.59 CFS

PEAK DISCHARGE RATE = 0.97 CFS

2155

4310

4310

4310

4310

2155

6465

10775

15085

19395

TO PUBLIC IMPROVEMENTS PLANS CONSTRUCT 2'x2' GRATE INLE **TOP OF GRATE = 4962.30** FL 18" = 4959.80 PROPOSED McDONALD'S RESTAURANT 38-101 BUILDING ±3,896 S.F. FFE = 4965.50T/C: 4964.66 Gut: 4964.00 STA. 0+00.00 LAT. B-4 STA. 0+5.00 LAT. B-4 CONSTRUCT 2'x2' GRATE INLE CONSTRUCT 6" 45° BEND FL 6" = 4960.41 TOP OF GRATE = 4964.1 FL 18" = 4959.41 FL 6" = 4960.66 STA. 0+24.28 LAT. B-3 CONSTRUCT 5' CURB INLET FL 6" = 4962.00 TC = 4962.75STA. 0+00.00 LAT. B-3 CONSTRUCT 18"x18" 60° WYE 18" = 4959.35STA. 0+00.00 LAT. B-CONSTRUCT 18"x18" 60° WYE FL 18" = 4959.14 TOP OF GRATE = 4962.45 FL 18" = 4959.45 0.12 STA. 0+74.10 LAT. B ONSTRUCT 2'x2' GRATE INLET TOP OF GRATE = 4964.00 DRAINAGE REPORT FL 18" = 4960.25 Site Location - The site is located on the east side of 12th Street NW, south of Indian School Road and north of the I-40 frontage road. Proposed development will include a McDonald's restaurant and associated paving, grading, landscaping, utility and storm water management

STA. 0+23.17 LINE

FL 18" = 4958.58 (IN)

FL 24" = 4958.58 (OUT)

(NMDOT STANDARD 511-03)

TC = 4963.15

FL 24" = 4958.50

 $D_{50} = 6$ " RIP RAP

SHOWN

2" DEEP ON FILTER

FABRIC FOR LIMITS

DĚŤEŇTľOŇ POŇD

VOLUME = 19,395 cf.

BOTTOM ELEV = 4958.50 ·

STA. 0+67.85 LINE A

CMP OUTFALL RISER

TOP OF RISER = 4961.50

CONNECT TO EX. CURB INLET

CONSTRUCT 12" PERFORATED

ONSTRUCT 5' CURB INLE

CONSTRUCT PIPE CULVERT HEADWALL

100-YEAR, 6-HOUR STORM SEWER SUMMARY Length Size Slope Contributing (ft) 4959.41 4963.70 4962.49 4959.35 4959.35 4963.70 4963.70 4962.33 0.0014 0.06 4962.42 4959.14 4959.14 4963.70 4962.23 4958.91 A-5 98.92 18 0.34 5.8 7.2 4.2 4958.95 4963.60 4962.06 4958.58 A-6 23.17 24 0.34 7.0 13.2 4.6 4958.58 4962.65 4961.65 4958.50 4963.00 4961.63 0.0008 0.19 4964.15 0.8 16.8 5.9 4960.25 4963.75 4961.75 4958.91 4963.60 | 4962.13 | 0.0001 | 0.00 4963.70 4962.33 0.0000 0.00 A-4 36.21 18 0.86 0.3 11.5 0.2 4959.45 4962.45 4962.34 4959.17 15.9 0.8 4959.75 4962.25 4962.49 4959.35

OWNER INFORMATION

SCALE: 1" = 30'

Drainage Area Number	Area	rea Land Treatment Condition			Excess Precipitation	Volume	Peak Discharge	Remarks	
	(ac)	Α	В	С	D	(in)	(ac/ft)	(cfs)	-
A-1	0.67	0.00	0.00	0.06	0.61	2.03	0.11	3.06	TO GRATE INLET A-1
A-2	0.09	0.00	0.00	0.00	0.09	2.12	0.02	0.42	ROOF DRAINS
A-3	0.29	0.00	0.00	0.01	0.28	2.09	0.05	1.35	TO CURB INLET A-3
A-4	0.07	0.00	0.00	0.01	0.06	1.98	0.01	0.31	TO GRATE INLET A-4
A-5	0.12	0.00	0.00	0.00	0.12	2.12	0.02	0.56	TO GRATE INLET A-5
A-6	0.28	0.00	0.00	0.04	0.24	1.98	0.05	1.25	TO CURB INLET A-6
A-7	0.24	0.00	0.00	0.23	0.01	1.17	0.02	0.77	TO DETENTION AREA
A-8	0.26	0.14	0.00	0.12	0.00	0.81	0.02	0.60	TO DETENTION AREA
A-9	0.15	0.00	0.00	0.12	0.03	1.33	0.02	0.52	TO LANDSCAPE AREA
A-10	0.06	0.00	0.00	0.06	0.00	1.13	0.01	0.19	TO LANDSCAPE AREA
A-11	0.03	0.00	0.00	0.00	0.03	2.12	0.01	0.14	TO GRATE INLET A-11
A-12	0.24	0.00	0.00	0.00	0.24	2.12	0.04	1.13	FLOW DEPTH AT CURB = 0.18
Total	2.26	0.14	0.00	0.65	1.47		0.33	9.17	

DETENTION AREA STAGE-DISCHARGE TABLE								
ELEVATION (ft)	1st Row Perforations (Elev = 4959)	2nd Row Perforations (Elev = 4959.5)	3rd Row Perforations (Elev = 4960)	4th Row Perforations (Elev = 4960.5)	5th Row Perforations (Elev = 4961)	TOTAL OUTFLOW (cfs)		
4958.5	0.00	0.00	0.00	0.00	0.00	0.00		
4959.0	0.00	0.00	0.00	0.00	0.00	0.00		
4959.5	0.11	0.00	0.00	0.00	0.00	0.11		
4960.0	0.16	0.11	0.00	0.00	0.00	0.27		
4960.5	0.19	0.16	0.11	0.00	0.00	0.46		
4961.0	0.22	0.19	0.16	0.11	0.00	0.68		
4961.5	0.25	0.22	0.19	0.16	0.11	0.93		
4962.0	0.27	0.25	0.22	0.19	0.16	1.09		
4962.6	0.30	0.27	0.25	0.22	0.19	1.23		
4963.0	0.32	0.30	0.27	0.25	0.22	1.36		

Notes: 1. Discharge is through a 12"-diameter CMP Riser with 1"-diameter perforations at 6" o.c.e.w. 2. There are 6 perforations per row, and 5 rows, with the invert of the top row at 4961 3. The top of riser is at an elevation of 4963.

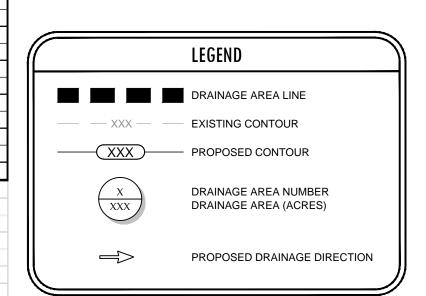
4. Flow through the perforations is calculated using the Orifice Equation.

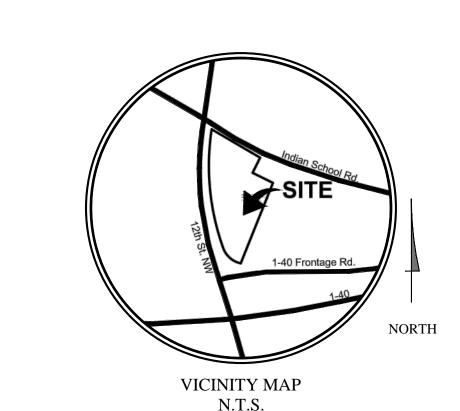
_	DETENTION AREA DRAIN TIME CALCULATIONS									
ELEVATION (ft)	Cumulative Pond Volume (cf)	Incremental Volume (cf)	Average Discharge Rate (cfs)	Incremental Drain Time (hrs)	Cumulative Drain Time (hrs)					
4961.63	13504				0.00					
		574	0.95	0.17						
4961.5	12930				0.17					
- V		2155	0.81	0.74						
4961.0	10775				0.91					
		2155	0.57	1.05						
4960.5	8620				1.96					
		2155	0.37	1.64						
4960.0	6465				3.60					
		2155	0.19	3.15						
4959.5	4310				6.75					
		2155	0.06	10.88						
4959.0	2155				14.49					

otes:	1. For the purpose of this calculation, it is	assumed that then	e is no drainage thr	ough
	the riser during the storm event.			
	2 At a time of 6 hours, the remaining stor	m water volume wil	Legual approximate	lv 4851

2. At a time of 6 nours, the remaining storm water volume will equal approximately 4851 cf. and the water surface elevation will be approximately 4959.63 3. The available storage volume after 6 hours of drain time is 14,544 c.f., which is greater than the

100-year, 6-hour runoff volume of 13,504 c.f. 4. The pond has sufficient capacity to store the volume from a second 100-year, 6-hour storm event after draining for 6 hours.





## **GENERAL NOTES**

- Bases, anchor bolts, conduit, and wiring for all signs are by the General Contractor. 3/4" empty conduit to locations shown at the lot perimeter for lot lighting is by the General Contractor. Lighting fixtures, bases, poles, conduit, and wiring are by the General Contractor.
- Lot lighting concrete footings to conform with the soils report recommendations for this site. Bases for flagpoles are by the General Contractor. Anchor bolts are by the flagpole supplier. General contractor shall coordinate with flag pole supplier prior to construction. The Contractor shall coordinate with all utility companies to determine exact point of service

connection at existing utility. Refer to the building electrical and plumbing drawings for utility

- service entrance locations, sizes, and circuiting. General Contractor <u>must</u> provide <u>exact</u> "as built" information upon completion. All elevations shown are in reference to the benchmark and must be verified by the General
- Contractor at groundbreak. Curb elevations shall be 6" above finish pavement unless noted otherwise.
- All landscape areas shall be rough graded to 6" below top of all walks and curbs. Finished grading, landscaping and sprinkler systems are by the Owner / Operator.
- 10. It is strongly recommended that no contractual agreements of any kind be signed prior to receiving and thoroughly reviewing all approvals from all of the regulatory authorities having

jurisdiction over this project.

- . Due to the nature of the work, all dimensions shown shall be considered approximate. Contractor shall field verify all dimensions prior to beginning construction. Shop drawings shall be submitted to the Architect and/or Engineer for approval prior to fabrication or installation of any item. Failure to adhere to this procedure shall place full responsibility for any errors directly upon the Contractor.
- 2. Contractor shall contact appropriate jurisdictional agencies prior to construction to confirm if independent testing or inspections will be required prior to their acceptance of work. Contractor shall make necessary arrangements to insure proper testing & inspections are documented such that work will be accepted at project completion. 3. Sidewalks around building shall have same subgrade preparation as building foundation.
- 14. All materials and construction within easements and R.O.W. shall conform to all governing authorities' jurisdictional standard construction details and specifications.
- 5. Topographic information taken from a Topographic Survey performed by Millman National Land Services. The Contractor shall notify the Engineer immediately, in writing, of any discrepancies or omissions to the topographic information. The Contractor(s) shall be responsible for confirming the location (horizontal/vertical) of any buried cables, conduits, pipes, and structures (storm sewer, sanitary sewer, water, gas, television, telephone, etc.) which impact the construction site. The Contractor(s) shall notify the Owner and Engineer if any discrepancies are found between the actual conditions versus the data contained in the construction plans. Any costs incurred as the result of not confirming the actual location (horizontal/vertical) of said cables, conduits, pipes, and structures shall be borne by the Contractor. Additionally, the Contractor(s) shall notify the Owner and Engineer if any errors or discrepancies are found on the construction documents (ps&e), which negatively impact the project. The Engineer and Owner shall be indemnified of problems and/or cost which may result from Contractor's failure to notify Engineer and Owner.
- 16. McDonald's reserves the right to request a compaction and/or a core sample. If tests prove correct, per the soils report, tests will be at the expense of McDonald's, otherwise G.C. will be
- Contractor shall comply to the fullest extent with the latest standards of OSHA directives or any other agency having jurisdiction for excavation and trenching procedure. Contractor shall use support systems, sloping, benching, or other means of protection, including but is not limited to, access and egress from all excavation and trenching. Contractor is responsible to comply with performance criteria for OSHA.

VERIFY W/MCDONALD'S: ASPHALT: CONCRETE: X

CONTRACTOR TO BID: ASPHALT: X CONCRETE: X

LY WITH GEOTECHNICAL REPORT	TERRACON CONSULTANTS, INC. JANUARY 23, 2013 PROJECT NO. 66135002							
ASPHALT PAVEMENT	IT RECOMMENDATIONS -ALTERNATE BID							
PAVEMENT MATERIALS	LIGHT	DUTY	HEAVY DUTY					
Asphalt Surface Course	3"	4-1/2"	4"	5-1/2"				
Aggregate Base Course	6"	)R ——— I	6"	K ———				
CONCRETE PAVEMI	ENT RECOMM	MENDATION	IS - BASE B	SID				
DAVEMENT MATERIALS	LICHT	DUTV	HEAL/V DUTV					

PAVING SPECIFICATION

- <u>VEMENT NOTES:</u>

  PAVEMENT AND SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE
- JANUARY 23, 2013. [PROJECT NO. 66135002] SUBGRADE SHOULD BE SCARIFIED AND COMPACTED TO AT LEAST 98 PERCENT OF THE STANDARD PROCTOR (ASTM D 698) MAXIMUM DRY DENSITY FOR A DEPTH OF AT LEAST 10 INCHES BELOW THE SURFACE. SEE SECTION 4.2 OF GEOTECH REPORT

PAVEMENT MAY BE PLACED AFTER THE SUBGRADE HAS BEEN PROPERLY COMPACTED,

- FINE-GRADED AND PROOF ROLLED AS SPECIFIED IN THE SOILS REPORT. ALL WORK SHALL BE IN ACCORDANCE WITH THE NEW MEXICO STATE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND THE CITY OF ALBUQUERQUE SPECIFICATIONS. WATER SHOULD NOT BE ALLOWED TO POND BEHIND CURBS AND SATURATE THE BASE MATERIALS. GRANULAR BASE MATERIAL SHOULD EXTEND THROUGH THE SLOPE PROVIDING UNDERGROUND DRAINAGE AN EXIT PATH.
- REFER TO C10.2 FOR CONCRETE JOINT SPECIFICATIONS UNLESS NOTED OTHERWISE IN THE SOILS REPORT. ALL CONCRETE PAVEMENT SHALL BE 4,000 PSI @ 28 DAYS AND REINFORCED WITH #3
- BARS @ 18" O.C.E.W. 3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

THE INFORMATION ABOVE IS BEING PROVIDED FOR REFERENCE ONLY AND SHALL NOT BE RELIED ON AS ACCURATE. THE

SURVEY INFORMATION							
PREPARED BY:	LEGAL DESCRIPTION:						
MILLMAN NATIONAL LAND SERV	VICES TRACT "E",						
1742 GEORGETOWN ROAD, SUITE H	LAND OF ST. ANTHONY'S ORPHANAGE						
HUDSON, OH 44236	PLAT BOOK D6, PAGE 158,						
(800) 520-1010 DATE: DECEMBER 29, 2012	RECORDS OF BERNALILLO COUNTY, N						

PLAN SCALE: 1" = 30'_XF	₹
ADDITION	

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STREET ADDRESS												
SEC OF 12TH ST. & INDIAN SCHOOL RD.			STATUS				DATE		BY			
CI		STATE		DATE DRAWN				FEB. 2013		H.	HJM	
ALBUQUERQUE		NEW MEXICO		PLAN CHECKED				11/19/13		DWL		
COUNTY:	SURVEY:	ABSTRACT NO.	AS-BUILT		+							
BERNALILLO												
L/C NUMBER:	CORPORATE DWG. NAME						<u> </u>		4			
030-0230	POST DEVELOPED DRAINAGE PLAN			C8.1								

MCDONALD'S USA, LLC GREATER SOUTHWEST REGION 511 E. CARPENTER FRWY, STE. 375 IRVING. TEXAS 75062 (972) 869-5346 CONTACT: LEE MORRIS Know what's **below. Call** before you dig. THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY JURISDICTIONAL ENTITIES. LAT B-4 A-2 33.08 6 4.81 0.4 1.5 2.0 4962.00 4965.50 4962.69 4960.42 4963.70 4962.57 0.0036 0.07 CONSTRUCT 18"x6" 60° WYE CONSTRUCT 2'x2' GRATE INLET Note: Calculations in accordance with the City of Albuquerque Development Process Manual TA. 0+00.00 LAT. B-1 Methodology – The proposed storm water management system was designed in accordance CONSTRUCT 18"x18" 60° WYE with Chapter 22 of the City of Albuquerque Development Process Manual. The site is located in L 18" = 4958.91 Bernalillo County Precipitation Zone 2. The 100-year, 6-hour frequency event was used as the principal design storm. Existing Conditions – The site is currently undeveloped, and consists of uncompacted native soil. As such it was assigned a Land Treatment Condition A. The current low spot is in the approximate center of the site. Approximately 0.22 acres of impervious area from the Queens of ূটি 🖠 Chapel Catholic Church to the east, and from Indian School Road drain to the site. Under 0.24 existing conditions very little storm water runoff leaves the site during most storm events. The runoff calculations for pre-development conditions are contained on Construction Drawing C8.0. Proposed Conditions - The proposed site is divided into 10 drainage basins. Basins A-1 and A-4 are collected by drop inlets in unpaved areas. Basin A-2 represents the building roof area, will is collected below grade and routed to the proposed 18" diameter storm drain main line. Basins A-3 and A-6 are collected by curb inlets. Basin A-5 is collected by a grated inlet in a paved area. Basins A-7 and A-8 drain to the detention area via surface flow. Basin A-9 will be contained on site in depressional storage areas. Basin A-10 will be retained in a landscaped area on-site. All unpaved areas were assigned a Land Treatment Condition C for proposed