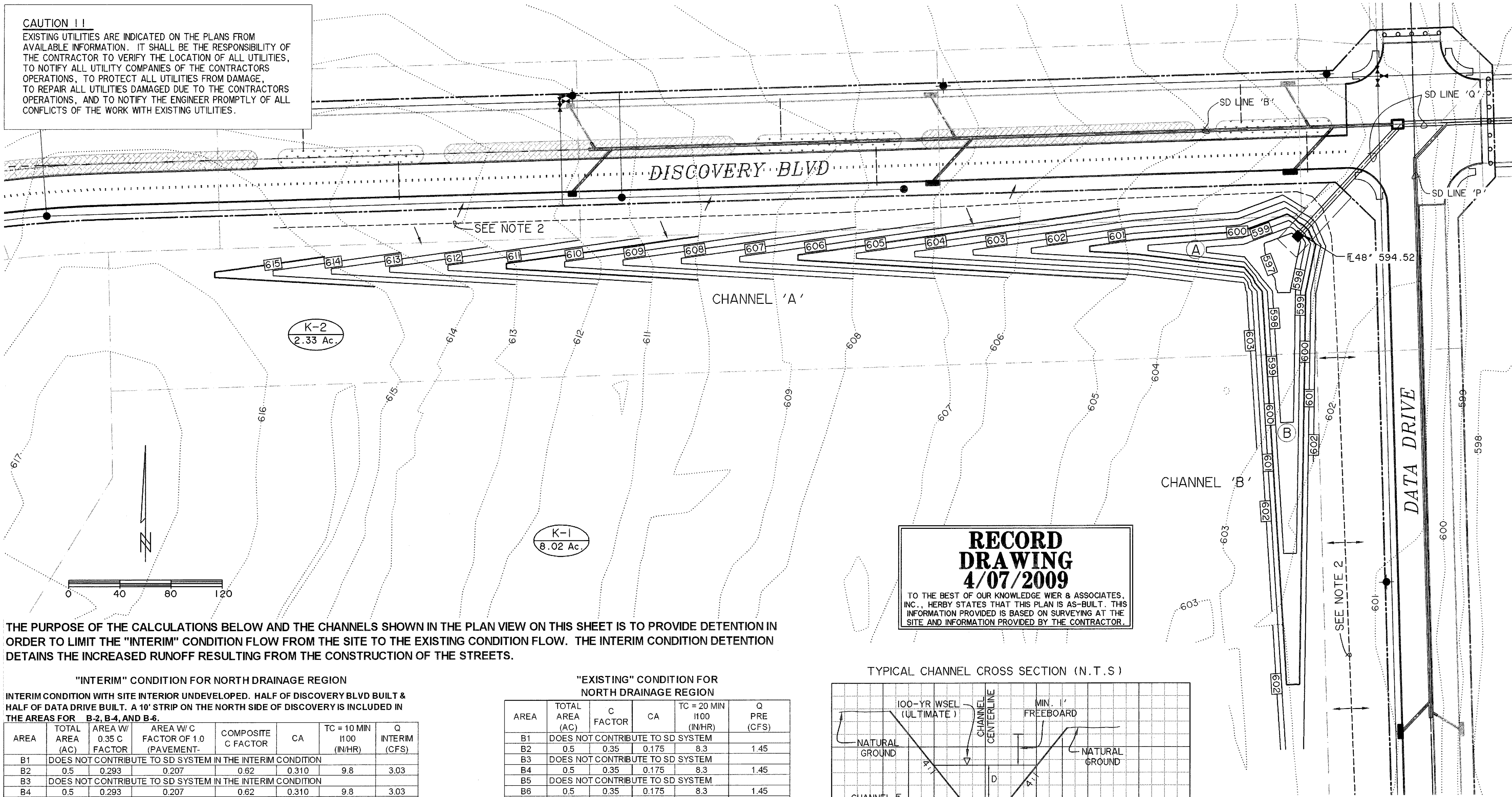


CAUTION !!
 EXISTING UTILITIES ARE INDICATED ON THE PLANS FROM AVAILABLE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES, TO NOTIFY ALL UTILITY COMPANIES OF THE CONTRACTORS OPERATIONS, TO PROTECT ALL UTILITIES FROM DAMAGE, TO REPAIR ALL UTILITIES DAMAGED DUE TO THE CONTRACTORS OPERATIONS, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING UTILITIES.



RECORD DRAWING
4/07/2009
 TO THE BEST OF OUR KNOWLEDGE WIER & ASSOCIATES, INC., HERBY STATES THAT THIS PLAN IS AS-BUILT. THIS INFORMATION PROVIDED IS BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

THE PURPOSE OF THE CALCULATIONS BELOW AND THE CHANNELS SHOWN IN THE PLAN VIEW ON THIS SHEET IS TO PROVIDE DETENTION IN ORDER TO LIMIT THE "INTERIM" CONDITION FLOW FROM THE SITE TO THE EXISTING CONDITION FLOW. THE INTERIM CONDITION DETENTION DETAINS THE INCREASED RUNOFF RESULTING FROM THE CONSTRUCTION OF THE STREETS.

"INTERIM" CONDITION FOR NORTH DRAINAGE REGION

INTERIM CONDITION WITH SITE INTERIOR UNDEVELOPED. HALF OF DISCOVERY BLVD BUILT & HALF OF DATA DRIVE BUILT. A 10' STRIP ON THE NORTH SIDE OF DISCOVERY IS INCLUDED IN THE AREAS FOR B-2, B-4, AND B-6.

AREA	TOTAL AREA (AC)	AREA W/ 0.35 C FACTOR	AREA W/ C FACTOR OF 1.0 (PAVEMENT)	COMPOSITE C FACTOR	CA	TC = 10 MIN 1100 (IN/HR)	Q INTERIM (CFS)
B1	DOES NOT CONTRIBUTE TO SD SYSTEM IN THE INTERIM CONDITION						
B2	0.5	0.293	0.207	0.62	0.310	9.8	3.03
B3	DOES NOT CONTRIBUTE TO SD SYSTEM IN THE INTERIM CONDITION						
B4	0.5	0.293	0.207	0.62	0.310	9.8	3.03
B5	DOES NOT CONTRIBUTE TO SD SYSTEM IN THE INTERIM CONDITION						
B6	0.5	0.293	0.207	0.62	0.310	9.8	3.03
K1*	8.02	8.02	0	0.35	2.807	8.3	23.30
K2*	2.33	2.33	0	0.35	0.816	8.3	6.77
M1	0.19	0.057	0.133	0.81	0.153	9.8	1.50
N1	DOES NOT CONTRIBUTE TO SD SYSTEM IN THE INTERIM CONDITION						
N2	0.41	0.138	0.272	0.78	0.320	9.8	3.14
P1	DOES NOT CONTRIBUTE TO SD SYSTEM IN THE INTERIM CONDITION						
P2	1.02	0.718	0.302	0.54	0.553	9.8	5.42
TOTAL	13.47	0.718	0.302	0.54	0.553	9.8	49.23

"EXISTING" CONDITION FOR NORTH DRAINAGE REGION

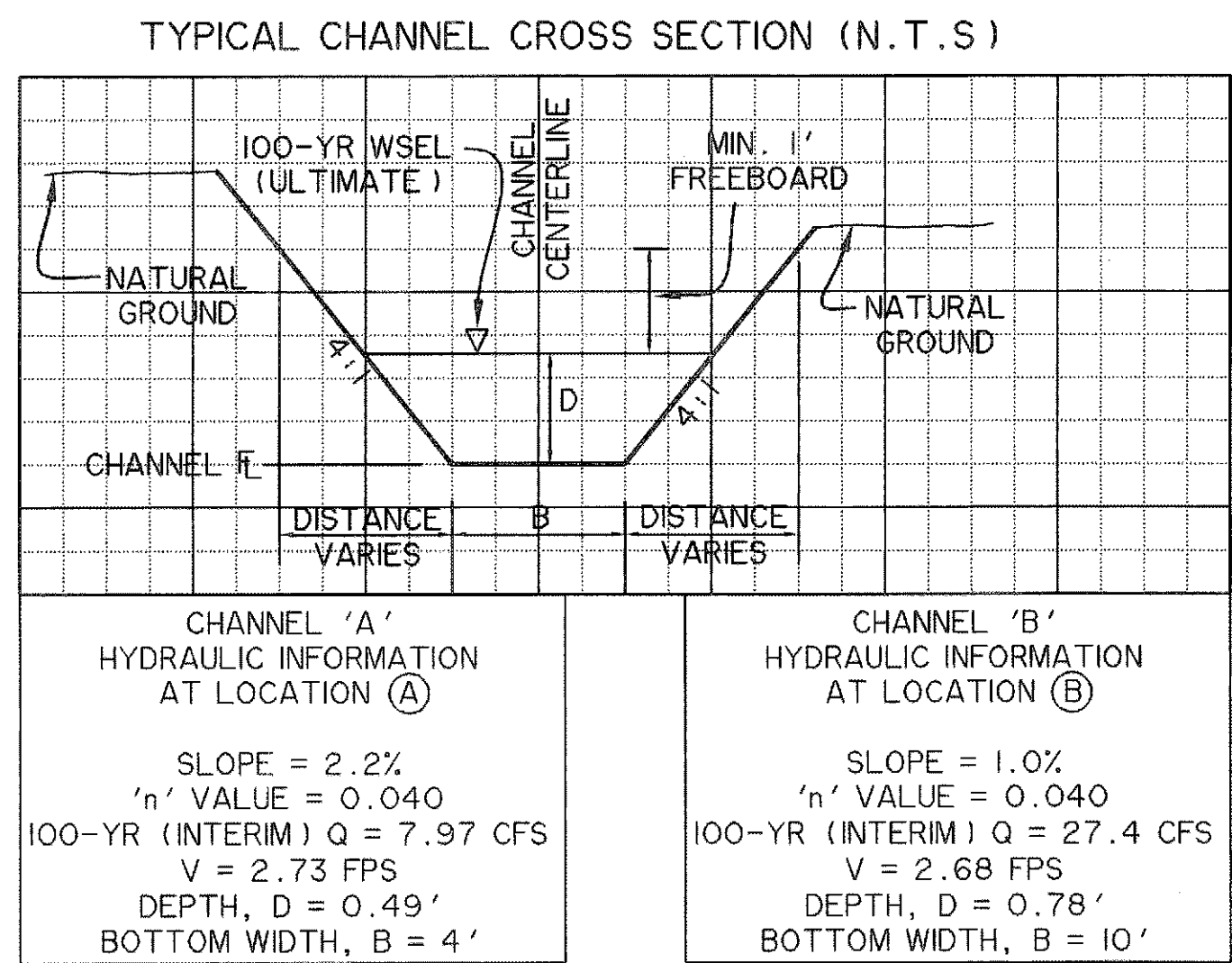
AREA	TOTAL AREA (AC)	C FACTOR	CA	TC = 20 MIN 1100 (IN/HR)	Q PRE (CFS)
B1	DOES NOT CONTRIBUTE TO SD SYSTEM				
B2	0.5	0.35	0.175	8.3	1.45
B3	DOES NOT CONTRIBUTE TO SD SYSTEM				
B4	0.5	0.35	0.175	8.3	1.45
B5	DOES NOT CONTRIBUTE TO SD SYSTEM				
B6	0.5	0.35	0.175	8.3	1.45
K1	8.02	0.35	2.807	8.3	23.30
K2	2.33	0.35	0.816	8.3	6.77
M1	0.19	0.35	0.067	8.3	0.55
N1	DOES NOT CONTRIBUTE TO SD SYSTEM				
N2	0.41	0.35	0.144	8.3	1.19
P1	DOES NOT CONTRIBUTE TO SD SYSTEM				
P2	1.02	0.35	0.357	8.3	2.96
TOTAL	13.47	0.35	4.7145		39.13

= TOTAL Q ALLOWABLE

TOTAL "INTERIM" Q100 FROM THE UNDETAINED AREAS B2, B4, B6, M1, N2, & P2 = 19.16 CFS
 TOTAL "PRE" Q100 FROM AREAS B2, B4, B6, M1, N2, & P2 = 39.13 CFS
 Q ALLOWABLE INTO SD LINE 'Q' = TOTAL Q ALLOW - UNDETAINED INTERIM Q = 39.1 CFS - 19.16 CFS = 20.0 CFS

* K1 AND K2 DRAINAGE AREAS HAVE Tc = 20 MINUTES IN EXISTING CONDITION AND IN THE INTERIM CONDITION (SITE IS UNDEVELOPED). THEREFORE, THE 100-YR RAINFALL INTENSITY FOR AREAS K1 & K2 IS 8.3 IN/HR. APPROXIMATELY 0.42 AC-FT OF STORAGE IS REQUIRED TO DETAIN THE 100-YEAR EVENT IN THE INTERIM CONDITIONS. THE 100-YEAR WATER SURFACE ELEVATION AT THE INLET STRUCTURE ENTRANCE TO STORM DRAIN LINE 'Q' IS 600.20 FT. SEE STORM DRAIN DETAILS FOR INLET STRUCTURE DETAIL.

COMPOSITE C FACTORS USED IN "INTERIM" CONDITION CALCULATIONS ONLY.
 THE NORTH SIDE OF DISCOVERY BLVD (AREAS B1, B3, & B5) AND THE EAST SIDE OF DATA DRIVE (AREAS N-1 & P-1) SHALL BE ACCOUNTED FOR, CONCERNING DETENTION, WITH THE FUTURE DEVELOPMENT OF THE ADJACENT PROPERTIES. HOWEVER, THE PROPOSED STORM DRAIN SYSTEM IN DISCOVERY AND DATA DRIVE HAS BEEN DESIGNED TO COLLECT AND CARRY THE FULLY DEVELOPED FLOWS FROM THESE AREAS.



- NOTES:
 1. SEED ALL DISTURBED/GRADED AREAS AFTER CONSTRUCTION. SEE TECHNICAL SPECIFICATIONS IN CONTRACT DOCUMENTS.
 2. APPROXIMATE HIGH POINT LOCATION. CONTRACTOR SHALL GRADE TO DRAIN AS INDICATED. MINIMUM SLOPE IS 2%.

BENCH MARKS

BM A - AN 'X' CUT IN THE BACK OF CURB LOCATED AT THE SOUTH RIGHT-OF-WAY LINE OF SPRINGER ROAD ±2470' EAST OF THE INTERSECTION OF SPRINGER ROAD AND F.M. 549. 598.80 FT.

BM B - AN 'X' CUT IN THE BACK OF CURB LOCATED AT THE NORTH RIGHT-OF-WAY LINE OF DISCOVERY BOULEVARD ±580' EAST OF THE INTERSECTION OF DISCOVERY BOULEVARD AND F.M. 549. 599.82 FT.

BM C - AN '□' CUT IN DISCOVERY BOULEVARD IN A MEDIAN NOSE ±60' WEST OF THE INTERSECTION OF DISCOVERY BOULEVARD AND F.M. 549. 598.20 FT.

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ROCKWALL TECHNOLOGY PARK PHASE III

NORTHERN INTERIM DETENTION CHANNELS

STATE OF TEXAS
 RONALD RAMIREZ
 61821
 REGISTERED PROFESSIONAL ENGINEER

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