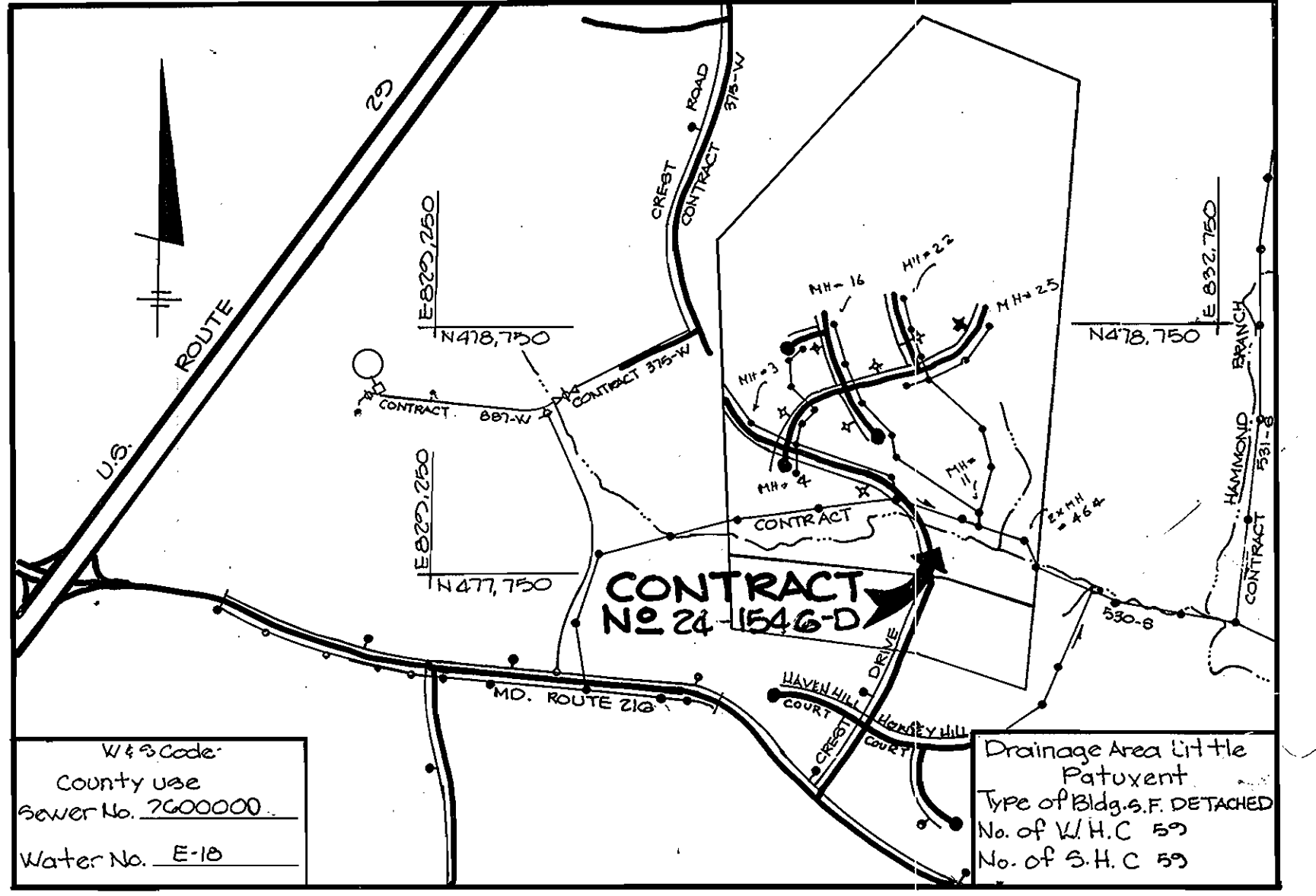


Bench Marks
 B.M.#1 Elev. 384.51
 Nail in base of 10' dead tree
 30'± south of Crest Drive.
 B.M.#2 Elev. 374.37
 Nail in base of 16' pine tree
 500'± southeast of Hammond
 Branch Way.



VICINITY MAP
 SCALE 1"=600'
GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.G.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 2'-0" Clear all poles by 2'-0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires the bracing of additional poles, any cost incurred by the owner for the bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
- For details not shown on the drawings, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction. The contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on existing utilities, they are by the symbol [] at the location of the test pit. A note containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
- Contractor shall notify the following utilities or agencies at least five working days before starting work shown on these plans:
 State Highway Administration - 531-5533
 Baltimore Gas & Electric Co - Contractor Services - 561-2585
 Baltimore Gas & Electric Co - Under Ground Damage Control - 234-5621
 Baltimore Gas & Electric Co - Trouble Shooting - 238-9013
 Miss Utility - 1-800-257-7777
 Colonial Pipeline Co - 795-1290
 Bureau of Utilities, Howard County Department of Public Works - 992-2966
- Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the contractor.
- Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the unit price bid for excavation and backfill.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- All water mains to be D.I.P. unless otherwise noted.
- Top of all water mains to have a minimum of 3/2" cover unless otherwise noted.
- Valves adjacent to trees shall be strapped to trees.
- Block all fittings with concrete.
- Bury line elevation on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with standard details. Soil around the fire hydrant to be compacted in accordance with Section 1003 & 1008 of the General Requirements for Water & Sewer.
- All water house connections shall be for an inside meter setting.
- The contractor shall not operate any water main valves on the existing system.
- For all copper water house connections utilize flared type fittings only.
- All sewer mains shall be C.S.P.X., V.C.P.X., PVC or A.C.P. Class 2400 unless otherwise noted.
- The contractor shall provide a joint in all sewer mains with 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter, unless otherwise noted.
- Manholes shown with 12" and 16" walls are brick manholes only.
- Manholes designated W.T. in plan and profile shall have water-tight frame and covers, Standard Detail G.5.52 volume IV. Where water-tight manhole frame and covers are used, set top of frame 1'-0" above finished grade.
- House (s) with the symbol "C.N.B." indicates cellar can not be served.
- All water house connections shall have a minimum vertical clearance of 12" above all sanitary sewer crossings.
- All sanitary sewer house connections shall have a minimum vertical clearance of 12" below all water main crossings.
- Profile stations shall be adjusted as necessary to conform to plan dimensions.
- No pipe shall be laid until lines of excavation have been brought to subgrade.

ITEM	QUANTITIES		MATERIAL/SUPPLIER
	ESTIMATED	AS BUILT	
12" Water	1277	1277	ATLANTIC STATES-CAST IRON
8" Water	2318 LF	2318	"
6" Water	743 LF	743	"
Fire Hydrants	7	7	MUELLER CO.
12" Valves	2	2	UNION FOUNDRY
8" Valves	7	7	"
6" Valves (excl. FH)	3	3	"
1" WHC	402 LF	501	VINCENT BLASS & HALSTEAD
3/4" WHC	875 LF	902	"
24" Casing Pipe	280 LF	280	"
8" Sewer	4130 LF	4069	CHALLOTTE A+F
6" SHC	1350 LF	1244	"
Manholes	328 VF	328	"
1/2" Drain For Water Main	4 Ea.	3	VINCENT BLASS & HALSTEAD
3" Blow-off	1 Ea.	1	"

Sediment Control measure for this contract will be implemented in accordance with Section 210 of the specification and shown on F-87-14

Howard Soil Conservation District:
 Reviewed for Howard Soil Conservation District and meets technical requirements.
Stephen M. Hahn 9-10-86 Date
 Chief, Bureau of Engineering
 Us Soil Conservation Service
 This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.
Stephen L. Rubin 9/10/86 Date
 Chief, Bureau of Utilities

THE RIEMER GROUP, INC.
 3105 NORTH RIDGE ROAD
 ELLICOTT CITY, MARYLAND 21043

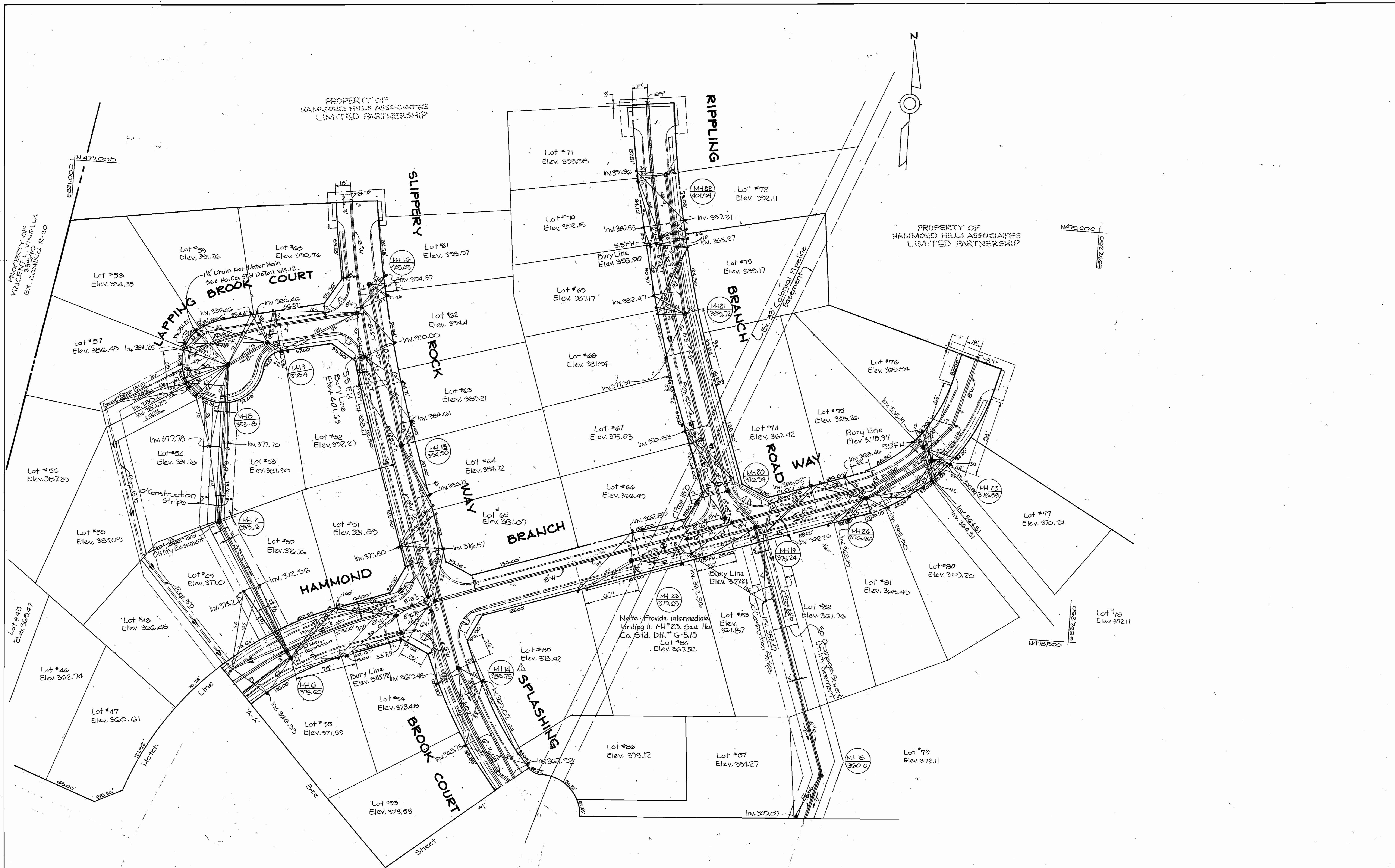


DES: DAM	
DRN: JHB	
CHK:	
DATE:	11/7/86
BY:	
NO.:	
REVISION:	REVISED FOR ALIGNMENT OF W&S AT END OF CREST DRIVE AND REVISED MH RIM ELEV. FOR MH 12

AS-BUILTS
PLAN OF WATER AND SEWER MAINS
 600' SCALE MAP NO. 46 BLOCK NO.

HAMMOND HILLS
 SECTION 2 AREA 1
 ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-1546-D
 6/22/87

SCALE AS SHOWN
 SHEET 1 OF 6



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Reimer 9-23-86
DIRECTOR OF PUBLIC WORKS DATE
Robert M. Reimer 9-23-86
CHIEF, BUREAU OF UTILITIES DATE

THE RIEMER GROUP, INC.
3105 NORTH RIDGE ROAD
ELLCOTT CITY, MARYLAND 21043



DES: DAM	
DRN: DDB	
CHK:	
DATE:	11/7/86
BY:	NO.
REVISION	

PLAN OF WATER AND
SEWER MAINS

HAMMOND HILLS
SECTION 2 AREA 1
CONTRACT DISTRICT NO. 6
CONTRACT NO. - 24-1546-D
AS-BUILT 6/22/87

SCALE
AS
SHOWN
SHEET
2 OF 6

